

# Modern Flanges

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Dalian Modern Machinery Co.,Ltd.

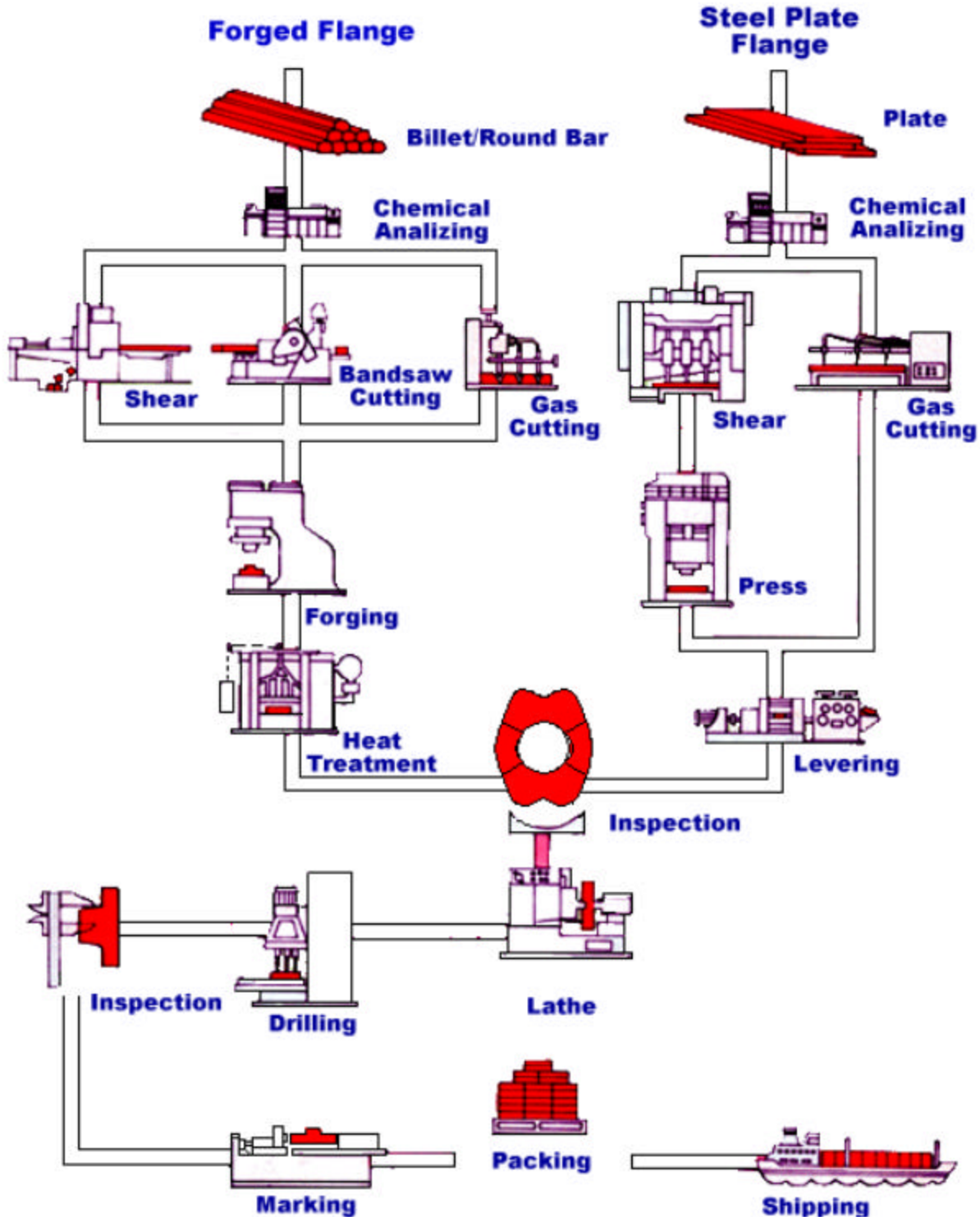
4 Ying Chun Street,Dalian, China 116021

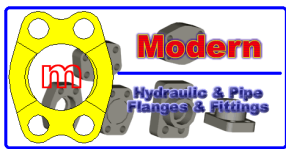
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URL:[Http://www.modernflanges.com](http://www.modernflanges.com)

## Manufacturing Process





## Modern Flanges' Catalog Part Numbering System

The following items will normally describe a flange: the bolt size and pattern, O-Ring or flat faced, connection type, connection size, geometry, material, and extra. Our way of describing these items uses Modern Machinery Co., Ltd. " Standard Catalog Numbering System (some special are numbered differently) as below:

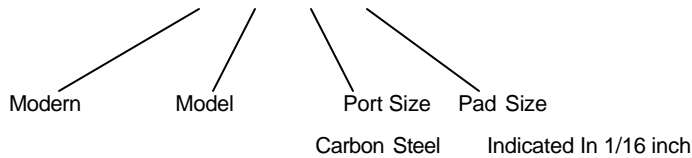
For Square Style example:

**M- 43(M)-16-16**

For SAE Style example

**M- 43(M)- 16 -16**

**(M):** M-Metric Option



All items available with mounting kits by adding suffix letter "K", for stainless steel material by adding suffix letters "SS".

### SAE 4-Bolt Hydraulic Flanges

SAE flanges are manufactured in accordance with the mounting dimensions and O-Rings of SAE J518 specifications, either Code 61, and Code 62, and ISO6162. Stock flanges include socket weld, butt weld, NPTF, and SAE straight thread connections and are available as reducers, in-line, elbows, tees and tubing, are available with either inch or metric threads. Gauge Ports Flanges are available with 1/4" NPTF or #7/16-20 SAE straight thread gauge port for nominal charge. Other sizes and type (BSPT, BSPP, ISO6164) are available at normal lead times. **Mounting Kits** The part number shown does not include the mounting kits. This allow the customer to specify the type of bolt and O-Ring material required. Mounting kit numbers include the followings:

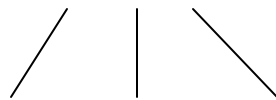
**SAE 4-Bolt Flanges** includes: 4 Socket Head Bolts, 4 hi-collar lock washers, and one " Buna N O-Ring"

**Split Flanges** includes: 4 Hex Head Gr. 8 Bolt, 4 Lock Washers and One O-Ring seal

H=Hex Head Bolts S=Socket Head Bolts

For example:

**H 38 175 (3/8" X 1-3/4") Metric M12X30**



**Hex Head Carbon Steel Bolt Size (3/8") Bolt Long**

**Socket Head without "H"**

Indicated In Size

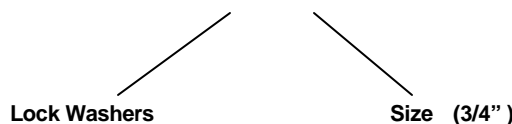
31=5/16"  
38=3/8"  
44=7/16"  
50=1/2"  
63=5/8"  
75=3/4"  
100=1"  
112=1-1/8"

Indicated In Long

100=1"  
125=1-1/4"  
175=1-3/4"  
200=2"  
300=3"  
350=3-1/2"  
400=4"  
450=4-1/2"

**Lock Washers** For example:

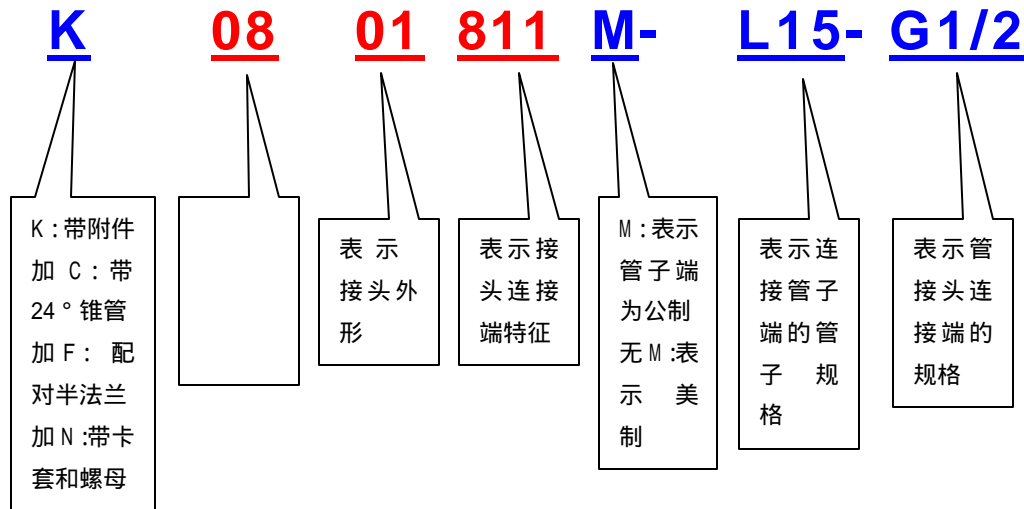
**L - 75**



## Modern Fittings' Catalog Part Numbering System

管接头零件代码说明：

Sample of Part Numbering



上述零件型号含义：

### Principal of Part Numbering:

**K**：配带所有附件：

With Mounting Kits

**08**：符合 ISO8434-1 标准带 24° 锥类的接头

24° Compression Fittings ISO 8434-1

**01**：外形特征为直通

Outside Shape of the Fitting: Straight

**811**：穿钢丝螺母、连接端 E 型密封的组合接头

With Wired Nut

**M**：24° 锥端为公制

Metric End

**L15**：管子外径规格 L15

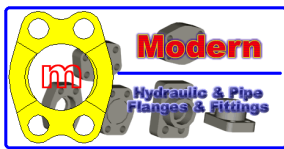
Tube Size

**G1/2**：连接端尺寸规格为 G1/2

Thread Figures

注：M39XX 系列为附件类零件型号

Note: M39XX is the Part Number of Cone Nipple and Cutting Rings



## Modern Flanges

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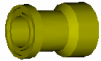
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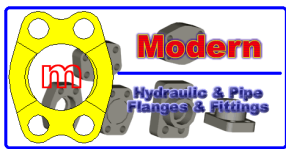
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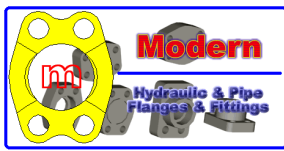


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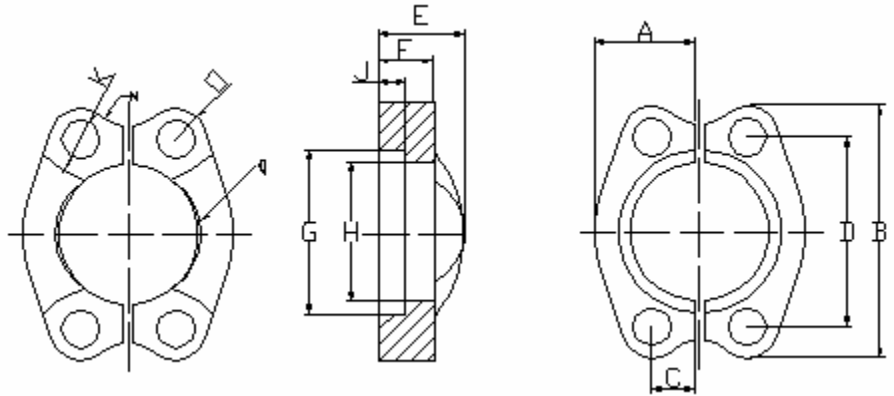
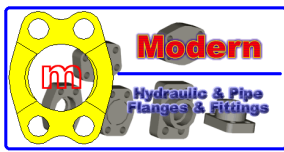
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### SAE J518 Split Flanges/Captive Flanges

#### SAE J518 Split Flanges/Captive Flanges Code 61 Split Flanges SAE Pattern

Part No. DRILL	SIZE	A	B	C	D	E	F	G	H	J	K	Mounting Kits			WT
												O-RING Buna.N	BOLT HHCS	LW	
SF-08	1/2	0.86	2.12	0.31	1.500	0.75	0.50	1.219	0.955	0.245	0.344	2210	31125	L-31	0.15
SFM-08													M8X30		
SF-12	3/4	0.98	2.56	0.40	1.875	0.88	0.56	1.531	1.265	0.245	0.406	2214	38125	L-38	0.20
SFM-12													M10X30		
SF-16	1	1.11	2.82	0.48	2.062	0.94	0.62	1.781	1.515	0.295	0.406	2219	38125	L-38	0.25
SFM-16													M10X30		
SF-20	1-1/4	1.39	3.12	0.56	2.312	0.88	0.56	2.031	1.720	0.295	0.469	2222	44150	L-44	0.35
SFM-20													M10X40		
SF-24	1-1/2	1.58	3.69	0.67	2.750	1.00	0.62	2.406	2.000	0.295	0.531	2225	50150	L-50	0.50
SFM-24													M12X40		
SF-32	2	1.86	4.00	0.81	3.062	1.03	0.62	2.844	2.470	0.355	0.531	2228	50150	L-50	0.60
SFM-32													M12X40		
SF-40	2-1/2	2.09	4.50	0.96	3.500	1.50	0.75	3.344	2.950	0.355	0.531	2232	50175	L-50	0.80
SFM-40													M2X45		
SF-48	3	2.53	5.31	1.18	4.188	1.62	0.88	4.031	3.580	0.355	0.656	2237	63175	L-63	1.40
SFM-48													M16X45		
SF-56	3-1/2	2.70	6.00	1.34	4.750	1.12	0.88	4.531	4.030	0.422	0.656	2241	63200	L-63	1.65
SFM-56													M16X50		
SF-64	4	2.95	6.38	1.49	5.125	1.38	1.00	5.031	4.530	0.422	0.656	2245	63200	L-63	1.85
SFM-64													M116X50		

### Code 62 Split Flanges

### SAE Pattern

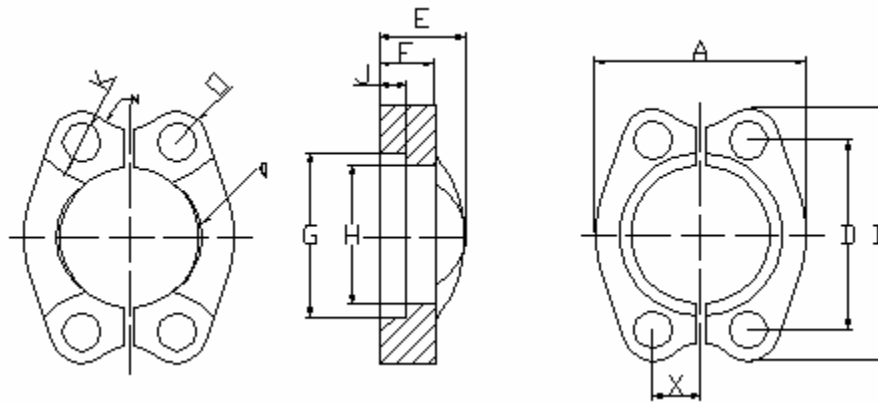
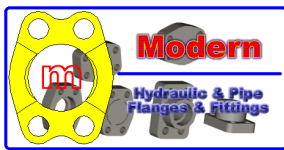
Part No. DRILL	SIZE	A	B	D	E	F	G	H	J	K	Mounting Kits			WT	
											O-RIN G Buna.N	BOLT HHCS	LW		
SFX-8	1/2	0.94	2.22	0.32	1.594	0.88	0.62	1.281	0.97	0.285	0.344	2210	31125	L-31	0.20
SFXM-8													M8X30		
SFX-012	3/4	1.14	2.81	0.43	2.000	1.12	0.75	1.656	1.28	0.325	0.406	2214	38150	L-38	0.40
SFXM-12													M10X40		
SFX-16	1	1.33	3.19	0.51	2.250	1.31	0.94	1.906	1.53	0.355	0.469	2219	44175	L-44	0.60
SFXM-16													M12X45		
SFX-20	1-1/4	1.48	3.75	0.59	2.625	1.50	1.06	2.156	1.75	0.385	0.531	2222	50175	L-50	0.85
SFXM-20													M14X50		
SFX-24	1-1/2	1.83	4.44	0.68	3.125	1.69	1.19	2.531	2.03	0.475	0.656	2225	63225	L-63	1.60
SFXM-24													M16X55		
SFX-32	2	2.20	5.25	0.84	3.812	2.06	1.44	3.156	2.66	0.475	0.781	2228	75275	L-75	2.25
SFXM-32													M20X70		
SFX-40	2-1/2	2.96	3.55	1.15	2.44	1.77	1.78	4.290	3.54	0.80	---	2232	---	L-100	4.60
SFXM-40											M24X75				
SFX-48	3	3.90	4.53	1.41	3.00	1.77	1.78	5.210	4.53	0.80	---	2237	---	L-125	9.50
SFXM-48											M30X90				

### SAE J518 Split Flanges/Captive Flanges

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### Code 61 Captive Flanges

### SAE Pattern

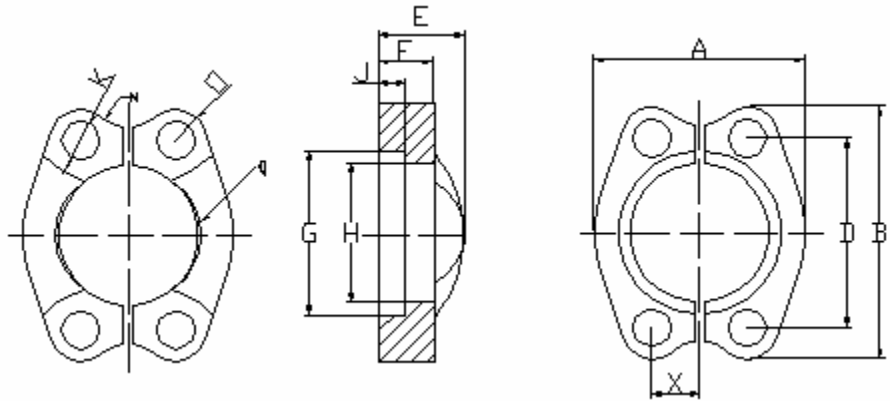
Part No. DRILL	SIZE	A	B	X	D	E	F	G	H	J	K	Mounting Kiits			WT
												O-RIN G Buna.N	BOLT HHCS	LW	
SFW-08	1/2	1.81	2.12	0.344	1.500	0.75	0.50	1.219	0.955	0.245	0.344	2210	31125	L-31	0.30
SFWM-08													M8X30		
SFW-12	3/4	2.06	2.56	0.438	1.875	0.88	0.56	1.531	1.265	0.245	0.406	2214	38125	L-38	0.40
SFWM-12													M10X30		
SFW-16	1	2.31	2.82	0.515	2.062	0.94	0.62	1.781	1.515	0.295	0.406	2219	38125	L-38	0.50
SFWM-16													M10X30		
SFW-20	1-1/4	2.88	3.12	0.594	2.312	0.88	0.56	2.031	1.720	0.295	0.469	2222	44150	L-44	0.70
SFWM-20													M10X40		
SFW-24	1-1/2	3.25	3.69	0.703	2.750	1.00	0.62	2.406	2.000	0.295	0.531	2225	50150	L-50	1.00
SFWM-24													M12X40		
SFW-32	2	3.81	4.00	0.844	3.062	1.03	0.62	2.844	2.470	0.355	0.531	2228	50150	L-50	1.20
SFWM-32													M12X40		
SFW-40	2-1/2	4.28	4.50	1.000	3.500	1.50	0.75	3.344	2.950	0.355	0.531	2232	50175	L-50	1.60
SFWM-40													M12X45		
SFW-48	3	5.16	5.31	1.219	4.188	1.62	0.88	4.031	3.580	0.355	0.656	2237	63175	L-63	2.80
SFWM-48													M16X45		
SFW-56	3-1/2	5.5	6.00	1.375	4.750	1.12	0.88	4.531	4.030	0.422	0.656	2241	63200	L-63	3.30
SFWM-56													M16X50		
SFW-64	4	6.00	6.38	1.531	5.125	1.38	1.00	5.031	4.530	0.422	0.656	2245	63200	L-63	3.70
SFWM-64													M16X50		

### Code 62 Captive Flanges

### SAE Pattern

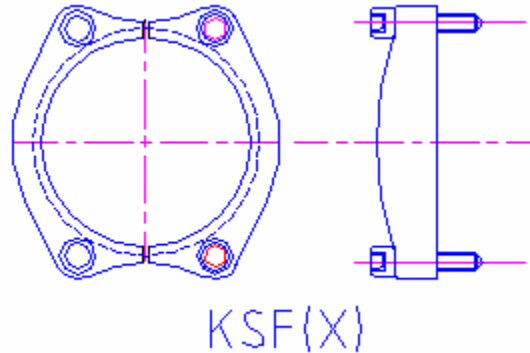
Part No. DRILL	SIZE	A	B	D	E	F	G	H	J	K	Mounting Kiits			WT	
											O-RIN G Buna.N	BOLT HHCS	LW		
SFXW-08	1/2	1.86	2.22	0.359	1.594	0.88	0.62	1.281	0.97	0.285	0.344	2210	31125	L-31	0.40
SFXWM-08													M8X30		
SFXW-012	3/4	2.38	2.81	0.469	2.000	1.12	0.75	1.656	1.28	0.325	0.406	2214	38150	L-38	0.80
SFXWM-12													M10X40		
SFXW-16	1	2.75	3.19	0.547	2.250	1.31	0.94	1.906	1.53	0.355	0.469	2219	44175	L-44	1.20
SFXWM-16													M12X45		
SFXW-20	1-1/4	3.06	3.75	0.625	2.625	1.50	1.06	2.156	1.75	0.385	0.531	2222	50175	L-50	1.70
SFXWM-20													M14X45		
SFXW-24	1-1/2	3.75	4.44	0.719	3.125	1.69	1.19	2.531	2.03	0.475	0.656	2225	63225	L-63	3.20
SFXWM-24													M16X55		
SFXW-32	2	4.50	5.25	0.875	3.812	2.06	1.44	3.156	2.66	0.475	0.781	2228	75275	L-75	4.50
SFXWM-32													M20X70		

### SAE J518 Split Flanges/Captive Flanges



Code 61 Captive Flanges												SAE Pattern	
Part No.	SIZE	A	B	X	D	E	F	G	H	J	K UNC-2B	WT	
TAPPED													
SFTW-08	1/2	1.81	2.12	0.344	1.500	0.75	0.50	1.219	0.955	0.245	5/16-18	0.3	
SFTWM-08											M8X1.25		
SFTW-12	3/4	2.06	2.56	0.438	1.875	0.88	0.56	1.531	1.265	0.245	3/8-16	0.4	
SFTWM-12											M10X1.5		
SFTW-16	1	2.31	2.82	0.515	2.062	0.94	0.62	1.781	1.515	0.295	3/8-16	0.5	
SFTWM-16											M10X1.5		
SFTW-20	1-1/4	2.88	3.12	0.594	2.312	0.88	0.56	2.031	1.720	0.295	3/8-16	0.7	
SFTWM-20											M10X1.5		
SFTW-24	1-1/2	3.25	3.69	0.703	2.750	1.00	0.62	2.406	2.000	0.295	1/2-13	1.0	
SFTWM-24											M12X1.75		
SFTW-32	2	3.81	4.00	0.844	3.062	1.03	0.62	2.844	2.470	0.355	1/2-13X1.75	1.2	
SFTWM-32											M12X1.75		
SFTW-40	2-1/2	4.28	4.50	1.000	3.500	1.50	0.75	3.344	2.950	0.355	1/2-13	1.6	
SFTWM-40											M12X1.75		
SFTW-48	3	5.16	5.31	1.219	4.188	1.62	0.88	4.031	3.580	0.355	5/8-11	2.8	
SFTWM-48											M16X2		
SFTW-56	3-1/2	5.50	6.00	1.375	4.750	1.12	0.88	4.531	4.030	0.422	5/8-11	3.3	
SFTWM-56											M16X2		
SFTW-64	4	6.00	6.38	1.531	5.125	1.38	1.00	5.031	4.530	0.422	5/8-11	3.7	
SFTWM-64											M16X2		

Code 62 Captive Flanges												SAE Pattern	
Part No.	SIZE	A	B	C	D	E	F	G	H	J	K UNC-2B MM	WT	
TAPPED													
SFXTW-8	1/2	1.86	2.22	0.359	1.594	0.88	0.62	1.281	0.97	0.285	5/16-18	0.4	
SFXTWM-8											M8X1.25		
SFXTW-12	3/4	2.38	2.81	0.469	2.000	1.12	0.75	1.656	1.28	0.325	3/8-16	0.8	
SFXTWM-12											M10X1.5		
SFXTW-16	1	2.75	3.19	0.547	2.250	1.31	0.94	1.906	1.53	0.355	7/16-14	1.2	
SFXTWM-16											M12X1.75		
SFXTW-20	1-1/4	3.06	3.75	0.625	2.625	1.50	1.06	2.156	1.75	0.385	1/2-13	1.7	
SFXTWM-20											M14X2		
SFXTW-24	1-1/2	3.75	4.44	0.719	3.125	1.69	1.19	2.531	2.03	0.475	5/8-11	3.0	
SFXTWM-24											M16X2		
SFXTW-32	2	4.50	5.25	0.875	3.812	2.06	1.44	3.156	2.66	0.475	3/4-10	4.5	
SFXTWM-32											M20X2.5		

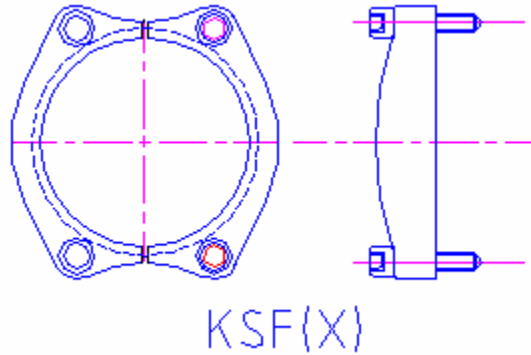


SAE J518 Split Flanges With Welding Parts 3000PSI=210 Bar					
Part No.	Size	Flange	Mounting Bolts	O-Ring	Wt
KSF-08	1/2"	SF-08	H31125	2210	0.21
KSFM-08		SFM-08	M8*25/40		
KSF-12	3/4"	SF-12	H-38125	2214	0.29
KSFM-12		SFM-12	M10*30/40		
KSF-16	1"	SF-16SF	H-38125	2219	0.33
KSFM-16		SFM-16	M10*30/45		
KSF-20	1-1/4"	SF-20	H-44150	2222	0.48
KSFM-20		SFM-20	M10*35/45		
KSF-24	1-1/2"	SF-24	H-50150	2225	0.69
KSFM-24		SFM-24	M12*35/50		
KSF-32	2"	SF-32	H-50150	2228	0.73
KSFM-32		SFM-32	M12*35/50		
KSF-40	2-1/2"	SF-40	H-50175	2232	1.00
KSFM-40		SFM-40	M12*40/60		
KSF-48	3"	SF-48	H-63175	2237	1.73
KSFM-48		SFM-48	M12*45/70		
KSF-56	3-1/2"	SF-56	H-63200	2241	1.97
KSFM-56		SFM-56	M12*45/70		
KSF-64	4"	SF-64	H-63200	2245	2.15
KSFM-64		SFM-64	M16*50/80		
KSF-80	5"	SF-80	H-63200	2253	3.12
KSFM-80		SFM-80	M16*50/80		

**KSF or KSF(X) includes 2 Split halves 4 High Grade UNC Bolts, 4 Lock Washers and 1 O-Ring Seal NBR 90**

**KSFM or KSF(X)M includes 2 Split halves 4 High Grade Metric Bolts, 4 Lock Washers and 1 O-Ring Seal NBR 90**

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SAE J518 Split Flanges With Welding Parts 6000PSI=400 Bar					
Part No.	Size	Flange Halves	Mounting Bolts	O-Ring	Weight
KSFX-08	1/2"	SFX-08	H-31125	2210	0.23
KSFXM-08		SFXM-08	M8*25/40		
KSFX-12	3/4"	SFX-12	H-38150	2214	0.48
KSFXM-12		SFXM-12	M10*30/40		
KSFX-16	1"	SFX-16	H-38175	2219	0.74
KSFXM-16		SFXM-16	M10*30/45		
KSFX-20	1-1/4"	SFX-20	H-50175	2222	1.06
KSFXM-20		SFXM-20	M10*35/45		
KSFX-24	1-1/2"	SFX-24	H-63225	2225	1.87
KSFXM-24		SFXM-24	M12*35/50		
KSFX-32	2"	SFX-32	H-75275	2228	2.98
KSFXM-32		SFXM-32	M12*35/50		
KSFXM-40	2-1/2"	SFXM40	M24*75	2232	5.41
KSFXM-48	3"	SFXM48	M30*90	2237	11.0

**KSF or KSFX includes 2 Split halves 4 High Grade UNC Bolts, 4 Lock Washers and 1 O-Ring Seal NBR 90**

**KSFM or KSFXM includes 2 Split halves 4 High Grade Metric Bolts, 4 Lock Washers and 1 O-Ring Seal NBR 90**

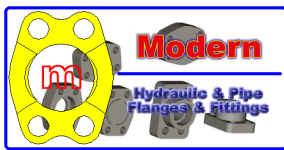
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**Dalian Modern Machinery Co.,Ltd.**

4 Ying Chun Street Dalian, China 116021

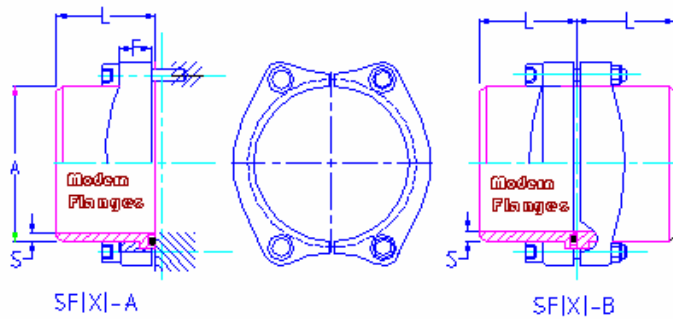
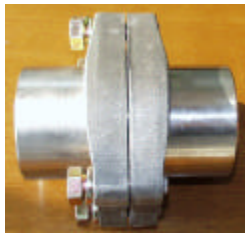
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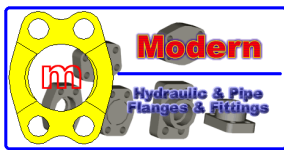
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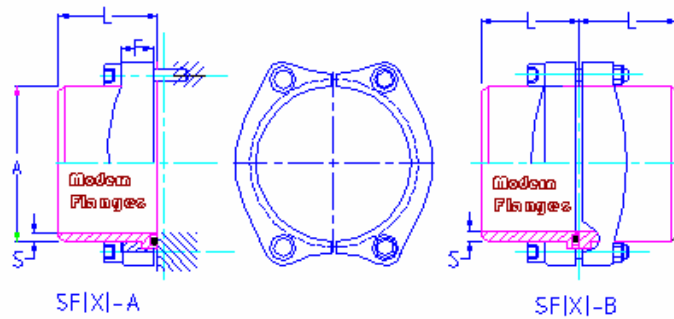
SAE J518 Split Flanges With Welding Parts 3000PSI=210 Bar										
Part No.	Size	Metric Pipe	US Pipe	Flange Union Kits	Welding Part	A	S	L	Wt Kgs	
SF-A-08	1/2"	20.0*3.0	40	KSF-08 KSFM-08	M-BW-08-08 E-BW-08	20.0	3.0	30	0.24	
SFM-A-08		21.3*2.6	80			21.3	2.6	30	0.24	
		22.0*2.0	160			22.0	2.0	30	0.23	
SF-A-12	3/4"	22.0*2.0	40	KSF-12 KSF-12	M-BW-12-12 E-BW-12	22.0	2.0	35	0.38	
SFM-A-12		25.0*3.0	80			25.0	3.0	35	0.39	
		26.9*3.6	160			26.9	3.6	35	0.39	
SF-A-16	1"	30.0*4.0	40	KSF-16 KSFM-16	M-BW-16-16 E-BW-16	30.0	4.0	40	0.47	
		30.0*5.0				30.0	5.0	40	0.52	
SFM-A-16		33.7*3.2				80	33.7	3.2	40	0.47
		33.7*4.5				160	33.7	4.5	40	0.50
	35.0*4.0		35.0	4.0	40	0.49				
SF-A-20	1-1/4"	38.0*3.0	40	KSF-20 KSFM-20	M-BW-20-20 E-BW-20	38.0	3.0	45	0.48	
		38.0*4.0				38.0	4.0	45	0.70	
		42.0*3.0				80	42.0	3.0	45	0.66
SF-A-20		42.3*3.2				160	42.3	3.2	45	0.66
	42.4*5.6		42.4	5.6	45	0.75				
SF-A-24	1-1/2"	38.0*3.0	40	KSF-24 KSFM-24	M-BW-24-24 E-BW-24	38.0	3.0	50	1.01	
		38.0*4.0				38.0	4.0	50	0.96	
		42.0*3.0				80	42.0	3.0	50	0.91
SFM-A-24		48.3*4.5				160	48.3	4.5	50	1.00
	48.3*6.3		48.3	6.3	50	1.09				
SF-A-32	2"	42.0*3.0	40	KSF-32 KSFM-32	M-BW-32-32 E-BW-32	42.0	3.0	60	1.18	
		42.3*3.2				42.3	3.2	60	1.19	
		48.3*3.2				80	48.3	3.2	60	1.16
SFM-A-32		60.3*2.9				160	60.3	2.9	60	1.08
		60.3*5.6					60.3	5.6	60	1.27
	60.3*8.0		60.3	8.0	60	1.44				
SF-A-40	2-1/2"	76.1*2.9	40	KSF-40 KSFM-40	M-BW-40-40 E-BW-40	76.1	2.9	70	1.48	
SFM-A-40		76.1*3.6				80	76.1	3.6	70	1.58
		76.1*7.10				160	76.1	7.1	70	1.93
SF-A-48	3"	60.3*3.6	40	KSF-48 KSFM-48	M-BW-48-48 E-BW-48	60.3	3.6	80	2.88	
		76.1*3.5				76.1	3.5	80	2.68	
		76.1*7.1				80	76.1	7.1	80	3.14
SFM-A-48		82.5*7.1				160	82.5	7.1	80	2.96
		88.9*3.2					88.9	3.2	80	2.44
	88.9*3.6		88.9	3.6	80	2.50				
SF-A-56	3-1/2"	76.1*3.6	40	KSF-56 KSFM-56	M-BW-56-56 E-BW-56	76.1	3.6	95	3.41	
SFM-A-56		88.9*3.6				80	88.9	3.6	95	3.22
SF-A-64	4"	76.1*3.6	40	KSF-64 KSFM-64	M-BW-64-64 E-BW-64	76.1	3.6	110	4.24	
		88.9*3.6				80	88.9	3.6	110	4.02
SFM-A-64		114.3*3.6				160	114.3	3.6	110	3.47
SF-A-80	5"	127.0*4.0	40	KSF-80 KSFM-80	M-BW-80-80 E-BW-80	127.0	4.0	120	5.43	
SFM-A-80		139.7*4.0				80	139.7	4.0	120	4.98



# Modern Flanges

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SAE J518 Split Flanges With Welding Parts 6000PSI=400 Bar									
Part No.	Size	Metric Pipe	US Pipe	Flange Kits	Welding Part	A	S	L	Weight
SFX-A-08 SFXM-A-08	1/2"	16.0*2.5	80	KSFY-08 KSFYM-08	M-BWX-08-08 E-BWX-08	16.0	2.5	40	0.31
		20.0*3.0	160			20.0	3.0	40	0.32
		21.3*4.5	XXH			21.3	4.5	40	0.33
SFX-A-12 SFXM-A-12	3/4"	20.0*3.0	80	KSFY-12 KSFYM-12	M-BWX-12-12 E-BWX-12	20.0	3.0	45	0.63
		25.0*4.0	160			25.0	4.0	45	0.64
		26.9*5.6	XXH			26.9	5.6	45	0.67
SFX-A-16 SFXM-A-16	1"	25.0*4.0	80 160 XXH	KSFY-16 KSFYM-16	M-BWX-16-16 E-BWX-16	25.0	4.0	50	0.99
		30.0*4.0				30.0	4.0	50	0.97
		30.0*5.0				30.0	5.0	50	1.00
		33.7*7.1				33.7	7.1	50	1.04
		38.0*6.0				38.0	6.0	50	1.03
SFX-A-20 AFXM-A-20	1-1/4"	30.0*4.0	80 160 XXH	KSFY-20 KSFYM-20	M-BWX-20-20 E-BWX-20	30.0	4.0	55	1.43
		38.0*5.0				38.0	5.0	55	1.42
		38.0*6.0				38.0	6.0	55	1.45
		42.4*8.8				42.4	8.8	55	1.54
SFX-A-24 SFXM-A-24	1-1/2"	25.0*4.0	80 160 XXH	KSFY-24 KSFYM-24	M-BWX-24-24 E-BWX-24	25.0	4.0	60	2.45
		38.0*5.0				38.0	4.0	60	2.42
		48.3*6.3				48.3	6.3	60	2.40
		48.3*8.				48.3	8.0	60	2.48
		48.3*8.8				48.3	8.8	60	2.52
SFX-A-32 SFXM-A-32	2"	60.3*8.0	80 160 XXH	KSFY-32 KSFYM-32	M-BWX-32-32 E-BWX-32	60.3	8.0	70	3.91
		60.3*10.0				60.3	10.0	70	4.05
		60.3*12.5				60.3	12.5	70	4.22
		63.8*8.0				63.5	8.0	70	4.30
		76.1*12.5				76.1	12.5	70	4.43
SFXM-A-40	2-1/2"	76.1*12.5	---	KSFYM-40	E-BWX-40	76.1	12.5	75	8.97
		88.9*16	---			88.9	16	75	8.06
SFXM-A-48	3"	101.6*16	---	KSFYM-48	E-BWX-48	101.6	16	80	15.30

The U.S. Sample: P/N: E80BWX-16-16 ; Metric Sample P/N: E-BWX-20-30.0\*4.0

80 means SCH.80 Pipe Metric pipe is 30.0\*4.0

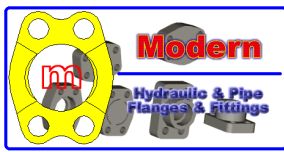
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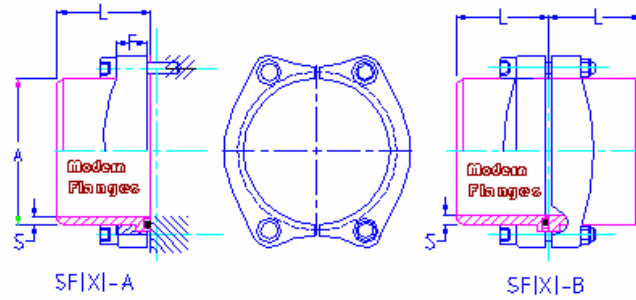
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4 Ying Chun Street Dalian, China 116021

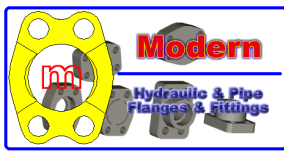
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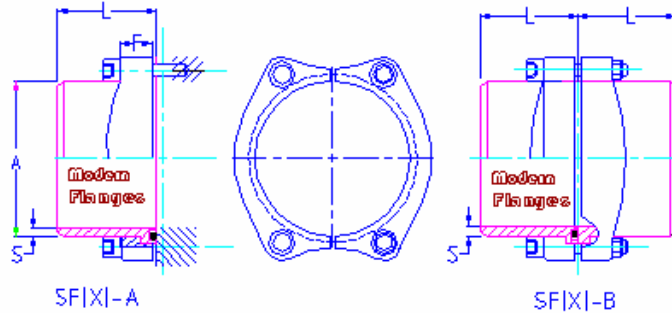
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SAE J518 Split Flanges With Welding Parts 3000PSI=210 Bar												
Part No.	Size	Metric Pipe	US Pipe	Flange Union Kits	Captive Flange	Welding Part O-Ring	Welding Part	A	S	L	Weight	
SF-B-08 SFM-B-08	1/2"	20.0*3.0	40	KSF-08	SFTW-08	M-BW-08-08 E-BW-08	M-BWN-08-08 E-BWN-08	20.0	3.0	30	0.47	
		21.3*2.6	80					21.3	2.6	30	0.47	
		22*2.0	160					22.0	2.0	30	0.45	
SF-B-12 SFM-B-12	3/4"	22.0*2.0	40	KSF-12	SFTW-12	M-BW-12-12 E-BW-12	M-BWN-12-12 E-BWN-12	22.0	2.0	30	0.65	
		22.0*2.0	80					22.0	2.0	35	0.67	
		25.0*3.0	160					25.0	3.0	35	0.67	
SF-B-16 SFM-B-16	1"	26.9*3.6	40	KSF-16	SFTW-16	M-BW-16-16 E-BW-16	M-BWN-16-16 E-BWN-16	26.9	3.6	35	0.89	
		30.0*4.0						80	30.0	4.0	40	0.93
		30.0*5.0						160	30.0	5.0	40	0.83
		33.7*3.2						40	33.7	3.2	40	0.89
		33.7*4.5						80	33.7	4.5	40	0.87
SF-B-20 SFM-B-20	1-1/4"	35.0*4.0	40	KSF-20	SFTW-20	M-BW-20-20 E-BW-20	M-BWN-20-20 E-BWN-20	35.0	4.0	40	0.93	
		38.0*3.0						80	38.0	3.0	45	1.22
		38.0*4.0						160	38.0	4.0	45	1.14
		42.0*3.0						40	42.0	3.0	45	1.14
		42.3*3.2						80	42.3	3.2	45	1.32
SF-B-24 SFM-B-24	1-1/2"	42.4*5.6	40	KSF-24	SFTW-24	M-BW-24-24 E-BW-24	M-BWN-24-24 E-BWN-24	42.4	5.6	45	1.79	
		38.0*3.0						80	38.0	3.0	50	1.69
		38.0*4.0						160	38.0	4.0	50	1.59
		42.0*3.0						40	42.0	3.0	50	1.77
		48.3*4.5						80	48.3	4.5	50	1.95
SF-B-32 SFM-B-32	2"	48.3*6.3	40	KSF-32	SFTW-32	M-BW-32-32 E-BW-32	M-BWN-32-32 E-BWN-32	48.3	6.3	50	2.13	
		42.0*3.0						80	42.0	3.0	60	2.15
		42.3*3.2						160	42.3	3.2	60	2.09
		48.3*3.2						40	48.3	3.2	60	1.93
		60.3*2.9						80	60.3	2.9	60	2.31
		60.3*5.6						160	60.3	5.6	60	2.65
SF-B-40 SFM-B-40	2-1/2"	60.3*8.0	40	KSF-40	SFTW-40	M-BW-40-40 E-BW-40	M-BWN-40-40 E-BWN-40	60.3	8.0	60	2.70	
		76.1*2.9						80	76.1	2.9	70	2.90
		76.1*3.6						160	76.1	3.6	70	3.60
SF-B-48 SFM-B-48	3"	76.1*7.1	40	KSF-48	SFTW-48	M-BW-48-48 E-BW-48	M-BWN-48-48 E-BWN-48	76.1	7.1	70	4.93	
		60.3*3.6						80	60.3	3.6	80	4.77
		76.1*3.5						160	76.1	3.5	80	4.93
		76.1*7.1						40	76.1	7.1	80	5.85
		82.5*7.1						80	82.5	7.1	80	4.45
		88.9*3.2						160	88.9	3.2	80	4.57
SF-B-56 SFM-B-56	3-1/2"	88.9*3.6	40	KSF-56	SFTW-56	M-BW-56-56 E-BW-56	M-BWN-56-56 E-BWN-56	88.9	3.6	80	6.35	
		76.1*3.6						80	76.1	3.6	95	5.97
SF-B-64 SFM-B-64	4"	88.9*3.6	40	KSF-64	SFTW-64	M-BW-64-64 E-BW-64	M-BWN-64-64 E-BWN-64	88.9	3.6	95	8.01	
		76.1*3.6						80	76.1	3.6	110	7.57
		114.3*3.6						160	114.3	3.6	110	6.47
SF-B-80 SFM-B-80	5"	127.0*4.0	40	KSF-80	SFTW-80	M-BW-80-80 E-BW-80	M-BWN-80-80 E-BWN-80	127.0	4.0	120	10.39	
		139.7*4.0						80	139.7	4.0	120	9.49



Modern is always touching the Future!

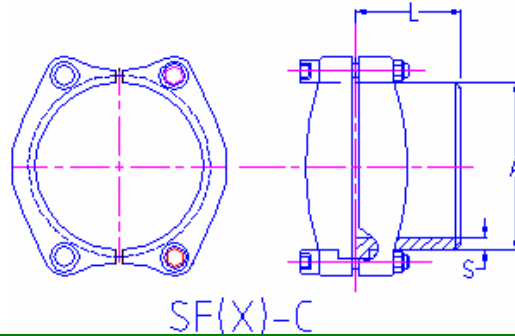
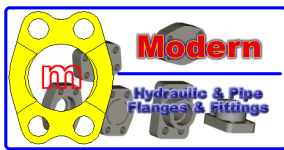


**SAE J518 Split Flanges With Welding Parts 6000PSI=400 Bar**

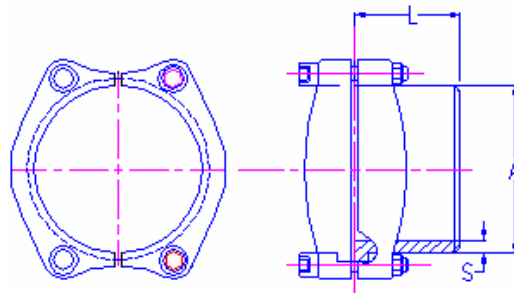
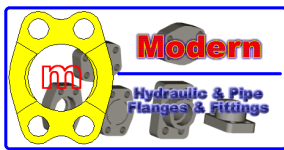
Part No.	Size	Metric Pipe	US Pipe	Flange Kits	Captive Flange	Welding Part O-Ring	Welding Part	A	S	L	Weight
SFX-B-08 SFXM-B-08	1/2"	16.0*2.5	80	KSFX-08	SFTW-08	M-BWX-08-08 E-BWX-08	M-BWXN-08-08 E-BWXN-08	16.0	2.5	40	0.47
		20.0*3.0	160					20.0	3.0	40	0.49
		21.3*4.5	XXH					21.3	4.5	40	0.51
SFX-B-12 SFXM-B-12	3/4"	20.0*3.0	80	KSFX-12	SFTW-12	M-BWX-12-12 E-BWX-12	M-BWXN-12-12 E-BWXN-12	20.0	3.0	45	0.96
		25.0*4.0	160					25.0	4.0	45	0.98
		26.9*5.6	XXH					26.9	5.6	45	1.04
SFX-B-16 SFXM-B-16	1"	25.0*4.0	80 160 XXH	KSFX-16	SFTW-16	M-BWX-16-16 E-BWX-16	M-BWXN-16-16 E-BWXN-16	25.0	4.0	50	1.42
		30.0*4.0						30.0	4.0	50	1.47
		30.0*5.0						30.0	5.0	50	1.53
		33.7*7.1						33.7	7.1	50	1.61
		38.0*6.0						38.0	6.0	50	1.59
SFX-B-20 SFXM-B-20	1-1/4"	30.0*4.0	80 160 XXH	KSFX-20	SFTW-20	M-BWX-20-20 E-BWX-20	M-BWXN-20-20 E-BWXN-20	30.0	4.0	55	2.20
		38.0*5.0						38.0	5.0	55	2.18
		38.0*6.0						38.0	6.0	55	2.24
		42.4*8.8						42.4	8.8	55	2.42
SFX-B-24 SFXM-B	1-1/2"	25.0*4.0	80 160 XXH	KSFX-24	SFTW-24	M-BWX-24-24 E-BWX-24	M-BWXN-24-24 E-BWXN-24	25.0	4.0	60	3.71
		38.0*5.0						38.0	4.0	60	3.65
		48.3*6.3						48.3	6.3	60	3.61
		48.3*8.						48.3	8.0	60	3.77
		48.3*8.8						48.3	8.8	60	3.85
SFX-B-32 SFXM-B-32	2"	60.3*8.0	80 160 XXH	KSFX-32	SFTW-32	M-BWX-32-32 E-BWX-32	M-BWXN-32-32 E-BWXN-32	60.3	8.0	70	5.89
		60.3*10.0						60.3	10.0	70	6.17
		60.3*12.5						60.3	12.5	70	6.51
		63.5*8.0						63.5	8.0	70	6.70
		76.1*12.5						76.1	12.5	70	6.93
SFXM-B-40	2-1/2"	76.1*12.5	---	KSFX-40	SFTW-40	E-BWX-40	E-BWXN-40	76.1	12.5	75	14.63
		88.9*16	---					88.9	16	75	14.81
SFXM-B-48	3"	101.6*16	---	KSFX-48	SFTW-48	E-BWX-48	E-BWXN-48	101.6	16	80	28.23

Working together we can make things happen





SAE J518 Split Flanges With Welding Parts 3000PSI=210 Bar											
Part No.	Size	Metric Pipe	US Pipe	Flange Union	Captive Flange	Welding Part	A	S	L	Weight	
SF-C-08	1/2"	20.0*3.0	40	KSF-08	SFTW-08	M-BWN-08-08 E-BWN-08	20.0	3.0	30	0.41	
SFM-C-08		21.3*2.6	80				21.3	2.6	30	0.41	
		22*2.0	160				22.0	2.0	30	0.40	
SF-C-12	3/4"	22.0*2.0	40	KSF-12	SFTW-12	M-BWN-12-12 E-BWN-12	22.0	2.0	30	0.56	
SFM-C-12		22.0*2.0	80				22.0	2.0	35	0.57	
		25.0*3.0	160				25.0	3.0	35	0.57	
SF-C-16	1"	26.9*3.6	40	KSF-16	SFTW-16	M-BWN-16-16 E-BWN-16	26.9	3.6	35	0.72	
SFM-C-16		30.0*4.0					80	30.0	4.0	40	0.74
		30.0*5.0					160	30.0	5.0	40	0.69
		33.7*3.2						33.7	3.2	40	0.72
		33.7*4.5						33.7	4.5	40	0.71
		35.0*4.0						35.0	4.0	40	
SF-C-20	1-1/4"	38.0*3.0	40	KSF-20	SFTW-20	M-BWN-20-20 E-BWN-20	38.0	3.0	45	0.78	
SFM-C-20		38.0*4.0					80	38.0	4.0	45	1.00
		42.0*3.0					160	42.0	3.0	45	0.96
		42.3*3.2						42.3	3.2	45	0.96
	42.4*5.6		42.4	5.6	45	1.05					
SF-C-24	1-1/2"	38.0*3.0	40	KSF-24	SFTW-24	M-BWN-24-24 E-BWN-24	38.0	3.0	50	1.47	
SFM-C-24		38.0*4.0					80	38.0	4.0	50	1.42
		42.0*3.0					160	42.0	3.0	50	1.37
		48.3*4.5						48.3	4.5	50	1.46
		48.3*6.3						48.3	6.3	50	1.55
SF-C-32	2"	42.0*3.0	40	KSF-32	SFTW-32	M-BWN-32-32 E-BWN-32	42.0	3.0	60	1.68	
SFM-C-32		42.3*3.2					80	42.3	3.2	60	1.69
		48.3*3.2					160	48.3	3.2	60	1.66
		60.3*2.9						60.3	2.9	60	1.58
		60.3*5.6						60.3	5.6	60	1.77
	60.3*8.0		60.3	8.0	60	1.94					
SF-C-40	2-1/2"	76.1*2.9	40	KSF-40	SFTW-40	M-BWN-40-40 E-BWN-40	76.1	2.9	70	2.22	
SFM-C-40		76.1*3.6					80	76.1	3.6	70	2.32
		76.1*7.1					160	76.1	7.1	70	2.67
SF-C-48	3"	60.3*3.6	40	KSF-48	SFTW-48	M-BWN-48-48 E-BWN-48	60.3	3.6	80	3.70	
SFM-C-48		76.1*3.5					80	76.1	3.5	80	3.62
		76.1*7.1					160	76.1	7.1	80	3.98
		82.5*7.1						82.5	7.1	80	4.44
		88.9*3.2						88.9	3.2	80	3.74
	88.9*3.6		88.9	3.6	80	2.80					
SF-C-56	3-1/2"	76.1*3.6	40	KSF-56	SFTW-56	M-BWN-56-56 E-BWN-56	76.1	3.6	95	4.91	
SFM-C-56		88.9*3.6					80	88.9	3.6	95	4.72
SF-C-64	4"	76.1*3.6	40	KSF-64	SFTW-64	M-BWN-64-64 E-BWN-64	76.1	3.6	110	5.92	
SFM-C-64		114.3*3.6					80	114.3	3.6	110	5.70
		127.0*4.0					160	127.0	4.0	120	5.15
SF-C-80	5"	139.7*4.0	40	KSF-80	SFTW-80	M-BWN-80-80 E-BWN-80	139.7	4.0	120	8.08	
SFM-C-80		139.7*4.0					80	139.7	4.0	120	7.63



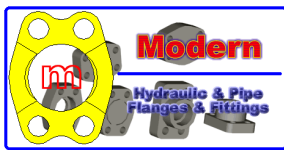
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**SAE J518 Split Flanges With Welding Parts 6000PSI=400 Bar**

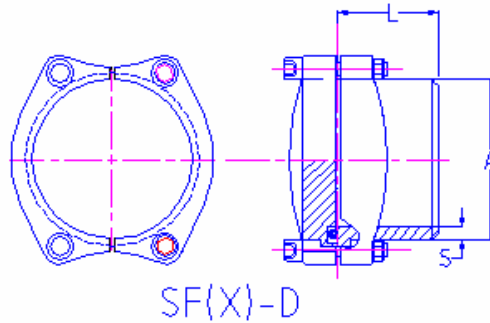
Part No.	Size	Metric Pipe	US Pipe	Flange Kits	Captive Flange	Welding Part	A	S	L	Weight
SFX-C-08 SFXM-C-08	1/2"	16.0*2.5	80	KSFX-08	SFTW-08	M-BWX-08-08 E-BWXN-08	16.0	2.5	40	0.39
		20.0*3.0	160				20.0	3.0	40	0.40
		21.3*4.5	XXH				21.3	4.5	40	0.41
SFX-C-12 SFXM-C-12	3/4"	20.0*3.0	80	KSFX-12	SFTW-12	M-BWX-12-12 E-BWXN-12	20.0	3.0	45	0.81
		25.0*4.0	160				25.0	4.0	45	0.82
		26.9*5.6	XXH				26.9	5.6	45	0.85
SFX-C-16 SFXM-C-16	1"	25.0*4.0	80 160 XXH	KSFX-16	SFTW-16	M-BWX-16-16 E-BWXN-16	25.0	4.0	50	1.17
		30.0*4.0					30.0	4.0	50	1.24
		30.0*5.0					30.0	5.0	50	1.27
		33.7*7.1					33.7	7.1	50	1.31
		38.0*6.0			38.0	6.0	50	1.30		
SFX-C-20 SFXM-C-20	1-1/4"	30.0*4.0	80 160 XXH	KSFX-20	SFTW-20	M-BWX-20-20 E-BWXN-20	30.0	4.0	55	1.83
		38.0*5.0					38.0	5.0	55	1.82
		38.0*6.0					38.0	6.0	55	1.85
		42.4*8.8					42.4	8.8	55	1.94
SFX-C-24 SFXM-C-24	1-1/2"	25.0*4.0	80 160 XXH	KSFX-24	SFTW-24	M-BWX-24-24 E-BWXN-24	25.0	4.0	60	3.13
		38.0*5.0					38.0	4.0	60	3.10
		48.3*6.3					48.3	6.3	60	3.08
		48.3*8.					48.3	8.0	60	3.16
		48.3*8.8					48.3	8.8	60	3.20
SFX-C-32 SFX-C-32	2"	60.3*8.0	80 160 XXH	KSFX-32	SFTW-32	M-BWX-32-32 E-BWXN-32	60.3	8.0	70	4.96
		60.3*10.0					60.3	10.0	70	5.10
		60.3*12.5					60.3	12.5	70	5.27
		63.5*8.0					63.5	8.0	70	5.40
		76.1*12.5					76.1	12.5	70	5.48
SFXM-C-40	2-1/2"	76.1*12.5	---	KSFX-40	SFTW-40	E-BWXN-40	76.1	12.5	75	12.07
		88.9*16					88.9	16	75	12.16
SFXM-C-48	3"	101.6*16	---	KSFX-48	SFTW-48	E-BWXN-48	101.6	16	80	23.90

**We control Quality From Start To Finish!**



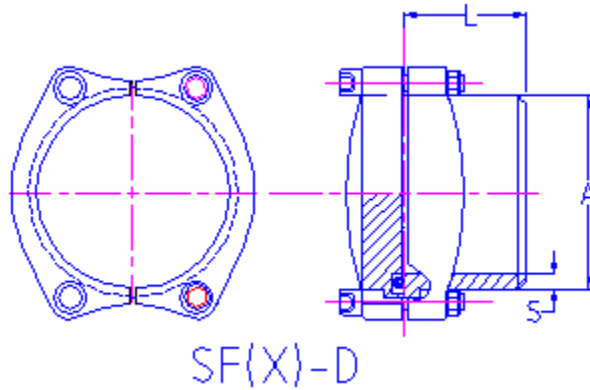


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SAE J518 Split Flanges With Welding Parts 3000PSI=210 Bar

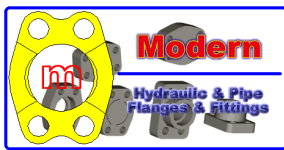
Part No.	Size	Metric Pipe	US Pipe	Flange Union Kits	Captive Flange	Welding Part W/O	Flanged Head	A	S	L	Weight
SF-D-08 SFM-D-08	1/2"	20.0*3.0	40	KSF-08	SFTW-08	M-BWN-08-08 E-BWN-08	M-FPO-08	20.0	3.0	30	0.46
		21.3*2.6						21.3	2.6	30	0.46
		22*2.0						22.0	2.0	30	0.45
SF-D-12 SFM-D-12	3/4"	22.0*2.0	160	KSF-12	SFTW-12	M-BWN-12-12 E-BWN-12	M-FPO-12	22.0	2.0	30	0.61
		22.0*2.0						22.0	2.0	35	0.67
		25.0*3.0						25.0	3.0	35	0.67
SF-D-16 SFM-D-16	1"	26.9*3.6	40	KSF-16	SFTW-16	M-BWN-16-16 E-BWN-16	M-FPO-16	26.9	3.6	35	0.86
		30.0*4.0						30.0	4.0	40	0.88
		30.0*5.0						30.0	5.0	40	0.83
		33.7*3.2						33.7	3.2	40	0.86
		33.7*4.5						33.7	4.5	40	0.85
SF-D-20 SFM-D-20	1-1/4"	35.0*4.0	40	KSF-20	SFTW-20	M-BWN-20-20 E-BWN-20	M-FPO-20	35.0	4.0	40	0.85
		38.0*3.0						38.0	3.0	45	0.97
		38.0*4.0						38.0	4.0	45	1.19
		42.0*3.0						42.0	3.0	45	1.15
		42.3*3.2						42.3	3.2	45	1.15
SF-D-24 SFM-D-24	1-1/2"	42.4*5.6	40	KSF-24	SFTW-24	M-BWN-24-24 E-BWN-24	M-FPO-24	42.4	5.6	45	1.24
		38.0*3.0						38.0	3.0	50	1.75
		38.0*4.0						38.0	4.0	50	1.70
		42.0*3.0						42.0	3.0	50	1.65
		48.3*4.5						48.3	4.5	50	1.74
SF-D-32 SFM-D-32	2"	48.3*6.3	40	KSF-32	SFTW-32	M-BWN-32-32 E-BWN-32	M-FPO-32	48.3	6.3	50	1.83
		42.0*3.0						42.0	3.0	60	2.11
		42.3*3.2						42.3	3.2	60	2.12
		48.3*3.2						48.3	3.2	60	2.09
		60.3*2.9						60.3	2.9	60	2.01
SF-D-40 SFM-D-40	2-1/2"	60.3*5.6	40	KSF-40	SFTW-40	M-BWN-40-40 E-BWN-40	M-FPO-40	60.3	5.6	60	2.20
		60.3*8.0						60.3	8.0	60	2.27
		76.1*2.9						76.1	2.9	70	2.87
SF-D-48 SFM-D-48	3"	76.1*3.6	40	KSF-48	SFTW-48	M-BWN-48-48 E-BWN-48	M-FPO-48	76.1	3.6	70	2.97
		76.1*7.1						76.1	7.1	70	3.32
		60.3*3.6						60.3	3.6	80	4.75
		76.1*3.5						76.1	3.5	80	4.67
		76.1*7.1						76.1	7.1	80	5.03
SF-D-56 SFM-D-56	3-1/2"	82.5*7.1	40	KSF-56	SFTW-56	M-BWN-56-56 E-BWN-56	M-FPO-56	82.5	7.1	80	5.49
		88.9*3.2						88.9	3.2	80	4.79
		88.9*3.6						88.9	3.6	80	4.85
SF-D-64 SFM-D-64	4"	88.9*3.6	80	KSF-64	SFTW-64	M-BWN-64-64 E-BWN-64	M-FPO-64	88.9	3.6	95	6.49
		76.1*3.6						76.1	3.6	110	8.14
		88.9*3.6						88.9	3.6	110	7.92
SF-D-80 SFM-D-80	5"	114.3*3.6	80	KSF-80	SFTW-80	M-BWN-80-80 E-BWN-80	M-FPO-80	114.3	3.6	110	7.92
		127.0*4.0						127.0	4.0	120	7.37
		139.7*4.0						139.7	4.0	120	11.66
		139.7*4.0	160					139.7	4.0	120	11.23



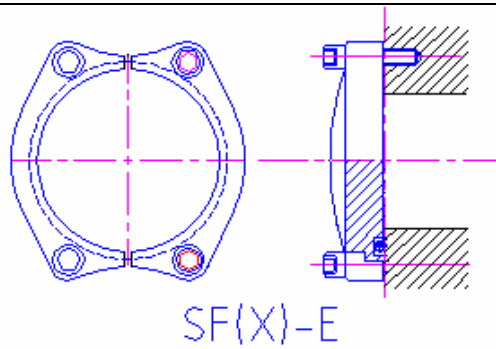
**SAE J518 Split Flanges With Welding Parts 6000PSI=400 Bar**

Part No.	Size	Metric Pipe	US Pipe	Flange Kits	Captive Flange	Flanged Head	Welding Part	A	S	L	Weight
SFX-D-08	1/2"	16.0*2.5	80	KSFX-08	SFTW-08	M-FPOX-08	M-BWXN-08-08 E-BWXN-08	16.0	2.5	40	0.53
		20.0*3.0	160					20.0	3.0	40	0.54
		21.3*4.5	XXH					21.3	4.5	40	0.55
SFX-D-12	3/4"	20.0*3.0	80	KSFX-12	SFTW-12	M-FPOX-12	M-BWXN-12-12 E-BWXN-12	20.0	3.0	45	1.03
		25.0*4.0	160					25.0	4.0	45	1.04
		26.9*5.6	XXH					26.9	5.6	45	1.07
SFX-D-16	1"	25.0*4.0	80 160 XXH	KSFX-16	SFTW-16	M-FPOX-16	M-BWXN-16-16 E-BWXN-16	25.0	4.0	50	1.53
		30.0*4.0						30.0	4.0	50	1.60
		30.0*5.0						30.0	5.0	50	1.63
		33.7*7.1						33.7	7.1	50	1.67
		38.0*6.0						38.0	6.0	50	1.66
SFX-D-20	1-1/4"	30.0*4.0	80 160 XXH	KSFX-20	SFTW-20	M-FPOX-20	M-BWXN-20-20 E-BWXN-20	30.0	4.0	55	2.28
		38.0*5.0						38.0	5.0	55	2.27
		38.0*6.0						38.0	6.0	55	2.30
		42.4*8.8						42.4	8.8	55	2.39
SFX-D-24	1-1/2"	25.0*4.0	80 160 XXH	KSFX-24	SFTW-24	M-FPOX-24	M-BWXN-24-24 E-BWXN-24	25.0	4.0	60	3.71
		38.0*5.0						38.0	4.0	60	3.68
		48.3*6.3						48.3	6.3	60	3.66
		48.3*8.						48.3	8.0	60	3.74
		48.3*8.8						48.3	8.8	60	3.78
SFX-D-32	2"	60.3*8.0	80 160 XXH	KSFX-32	SFTW-32	M-FPOX-32	M-BWXN-32-32 E-BWXN-32	60.3	8.0	70	6.13
		60.3*10.0						60.3	10.0	70	6.27
		60.3*12.5						60.3	12.5	70	6.44
		63.5*8.0						63.5	8.0	70	6.50
		76.1*12.5						76.1	12.5	70	6.65
SFX-D-40	2-1/2"	76.1*12.5	---	KSFX-40	SFTW-40	M-FPOX-40	E-BWXN-40	76.1	12.5	75	14.77
		88.9*16						88.9	16	75	14.86
SFX-D-48	3"	101.6*16	---	KSFX-48	SFTW-48	M-FPOX-48	E-BWXN-48	101.6	16	80	29.10

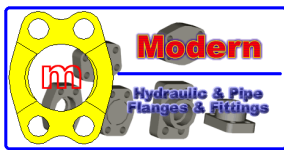




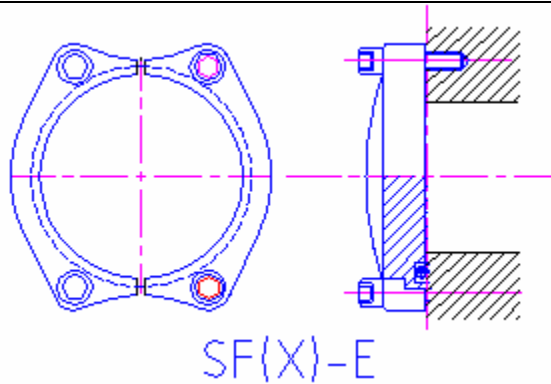
Modern is always touching the Future!



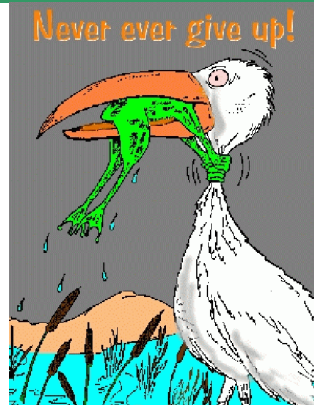
SAE J518 Split Flanges With Welding Parts 3000PSI=210 Bar						
Part No.	Size	Metric Pipe	US Pipe	Flange Union Kits	Flanged Head	Weight
SF-E-08 SFM-E-08	1/2"	20.0*3.0	40	KSF-08 KSFM-08	M-FPO-08	0.26
		21.3*2.6	80			0.26
		22*2.0	160			0.26
SF-E-12 SFM-E-12	3/4"	22.0*2.0	40	KSF-12 KSFM-12	M-FPO-12	0.34
		22.0*2.0	80			0.39
		25.0*3.0	160			0.39
SF-E-16 SFM-E-16	1"	26.9*3.6	40 80 160	KAS-16 KSFM-16	M-FPO-16	0.47
		30.0*4.0				0.47
		30.0*5.0				0.47
		33.7*3.2				0.47
		33.7*4.5				0.47
SF-E-20 SFM-E-20	1-1/4"	35.0*4.0	40 80 160	KSF-20 KSFM-20	M-FPO-20	0.52
		38.0*30				0.67
		38.0*4.0				0.67
		42.0*3.0				0.67
		42.3*3.2				0.67
SF-E-24 SFM-E-24	1-1/2"	42.4*5.6	40 80 160	KSF-24 KSFM-24	M-FPO-24	0.97
		38.0*30				0.97
		38.0*4.0				0.97
		42.0*3.0				0.97
		48.3*4.5				0.97
SF-E-32 SFM-E-32	2"	48.3*6.3	40 80 160	KSF-32 KSFM-32	M-FPO-32	1.16
		42.0*3.0				1.16
		42.3*3.2				1.16
		48.3*3.2				1.16
		60.3*2.9				1.16
SF-E-40 SFM-E-40	2-1/2"	60.3*5.6	40 80 160	KSF-40 KSFM-40	M-FPO-40	1.65
		60.3*8.0				1.65
		76.1*2.9				1.65
SF-E-48 SFM-E-48	3"	76.1*3.6	40 80 160	KSF-48 KSFM-48	M-FPO-48	2.78
		76.1*3.5				2.78
		76.1*7.1				2.78
		82.5*7.1				2.78
		88.9*3.2				2.78
SF-E-56 SFM-E-56	3-1/2"	88.9*3.6	40 80	KSF-56 KSFM-56	M-FPO-56	3.55
		76.1*3.6				3.55
SF-E-64 SFM-E-64	4"	114.3*3.6	40 80 160	KSF-64 KSFM-64	M-FPO-64	4.37
		127.0*4.0				4.37
		127.0*4.0				4.37
SF-E-80 SFM-E-80	5"	139.7*4.0	40 80	KSF-80 KSFM-80	M-FPO-80	6.70
		139.7*4.0				6.72

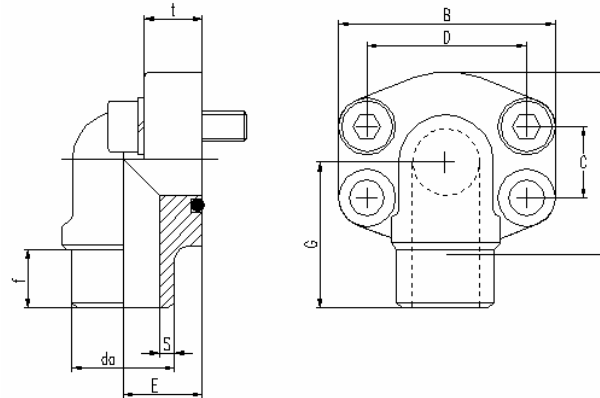


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SAE J518 Split Flanges With Welding Parts 6000PSI=400 Bar						
Part No.	Size	Metric Pipe	US Pipe	Flange Kits	Flanged Head	Weight
SFX-E-08 SFXM-E-08	1/2"	16.0*2.5	80	KSFX-08 KSFXM-08	M-FPOX-08	0.37
		20.0*3.0	160			0.37
		21.3*4.5	XXH			0.37
SFX-E-12 SFXM-E-12	3/4"	20.0*3.0	80	KSFX-12 KSFXM-12	M-FPOX-12	0.70
		25.0*4.0	160			0.70
		26.9*5.6	XXH			0.70
SFX-E-16 SFXM-E-16	1"	25.0*4.0	80 160 XXH	KSFX-16 KSFXM-16	M-FPOX-16	1.10
		30.0*4.0				1.10
		30.0*5.0				1.10
		33.7*7.1				1.10
SFX-E-20 SFXM-E-20	1-1/4"	38.0*4.0	80 160 XXH	KSFX-20 KSFXM-20	M-FPOX-20	1.51
		38.0*5.0				1.51
		38.0*6.0				1.51
		42.4*8.8				1.51
SFX-E-24 SFXM-E-24	1-1/2"	25.0*4.0	80 160 XXH	KSFX-24 KSFXM-24	M-FPOX-24	2.45
		38.0*5.0				2.45
		48.3*6.3				2.45
		48.3*8.8				2.45
SFX-E-32 SFXM-E-32	2"	60.3*8.0	80 160 XXH	KSFX-32 KSFXM-32	M-FPOX-32	4.15
		60.3*10.0				4.15
		60.3*12.5				4.15
		76.1*12.5				4.15
SFXM-E-40	2-1/2"	76.1*12.5	---	KSFXM-40	M-FPOX-40	8.11
		88.9*16				8.11
SFXM-E-48	3"	101.6*16	---	KSFXM-48	M-FPOX-48	15.17





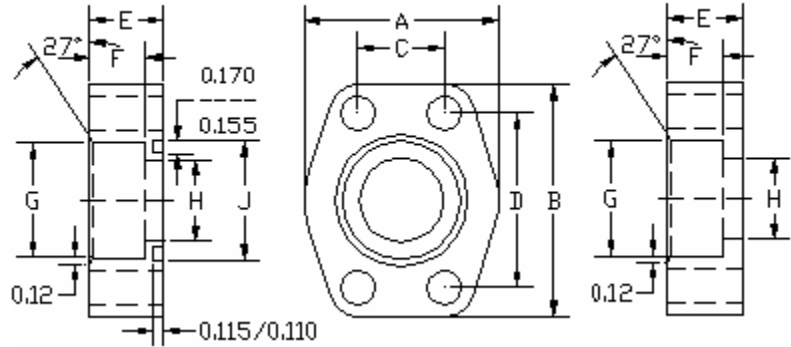
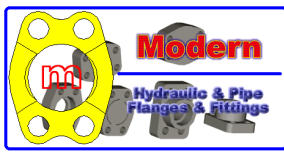
## AFW-90

SAE Flange Elbow Butt Weld 3000PSI=210 Bar													
Part No. Europe	Size	daxS	A	B	C	D	E	f	G	t	Mounting Kits	O-Ring	Wt
AFW-90-08-08	1/2"	21.6*4.3	46.0	54	17.5	38.1	18	12	40	16	M8*30	2210	0.35
AFW-90-12-12	3/4"	27.2*4.1	52.4	65.1	22.2	47.6	22	12	41	19	M10*35	2214	0.53
AFW-90-16-16	1"	34.5*4.7	58.8	69.9	26.2	52.4	28	13	50	19	M10*35	2219	0.62
AFW-90-20-20	1-1/4"	42.8*5.4	73.0	79.4	30.2	58.7	30	13	57	23	M10*40	2222	1.00
AFW-90-24-24	1-1/2"	48.6*5.3	82.6	93.7	35.7	69.9	36	14	66	26	M12*45	2225	1.50
AFW-90-32-32	2"	61.0*5.0	96.9	101.6	42.9	77.8	44	15	66	28	M12*45	2228	2.05

SAE Flange Elbow Butt Weld 6000PSI=410 Bar													
Part No.	Size	daxS	A	B	C	D	E	f	G	t	Mounting Kits	O-Ring	Wt
AFWX-90-08-08	1/2"	21.6*4.3	46.0	54	17.5	38.1	18	12	40	16	M8*30	2210	0.38
AFWX-90-12-12	3/4"	27.2*4.1	52.4	65.1	22.2	47.6	22	12	41	19	M10*35	2214	0.67
AFWX-90-16-16	1"	34.5*4.7	58.8	69.9	26.2	52.4	28	13	50	19	M10*35	2219	1.04
AFWX-90-20-20	1-1/4"	42.8*5.4	73.0	79.4	30.2	58.7	30	13	57	23	M10*40	2222	1.80
AFWX-90-24-24	1-1/2"	48.6*5.3	82.6	93.7	35.7	69.9	36	14	66	26	M12*45	2225	2.72
AFWX-90-32-32	2"	61.0*5.0	96.9	101.6	42.9	77.8	44	15	66	28	M12*45	2228	4.03

AFW-90/AFWX-90 contains:

- 1-One welding Flange
- 2-4 Gr.8 Bolts
- 3-4 Lock Washers
- 4-1 Burn. N.90 O-ring



### Flat Socket Pipe

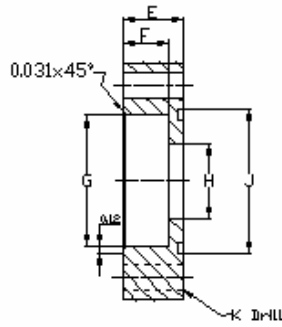
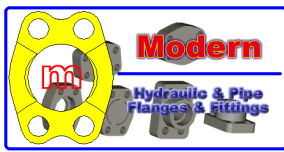
### SAE Code 61

Part. No.	PIPE SIZE	A	B	C	D	E	F	G	H	L MAX.	L MIN.	G/J DRILL /TAP UN-2B	Mounting KITS			WT
													O-RING Buna.N	BOLT SHCS	LW HC	
M-04-08-08	1/2	1.813	2.125	0.688	1.500	0.750	0.560	0.855	0.50	1.005	1.000	0.344	2210	31150	H-031	0.7
M-61-08-08												5/16-18				
M-04-12-12	3/4	2.063	2.563	0.875	1.875	0.750	0.560	1.062	0.75	1.255	1.250	0.406	2214	38150	H-038	0.9
M-61-12-12												3/8-16				
M-04-16-16	1	2.313	2.750	1.031	2.062	0.880	0.630	1.328	1.00	1.565	1.560	0.406	2219	38175	H-038	1.0
M-61-16-16												3/8-16				
M-04-20-20	1-1/4	2.875	3.125	1.188	2.312	0.940	0.690	1.672	1.25	1.755	1.750	0.469	2222	44175	H-044	1.5
M-61-20-20												7/16-14				
M-04-24-24	1-1/2	3.250	3.688	1.406	2.750	1.190	0.750	1.922	1.50	2.125	2.115	0.531	2225	50225	H-050	2.3
M-61-24-24												1/2-13				
M-04-32-32	2	3.813	4.000	1.688	3.062	1.380	0.875	2.406	2.00	2.500	2.490	0.531	2228	50250	H-050	3.2
M-61-32-32												1/2-13				
M-04-40-40	2-1/2	4.281	4.500	2.000	3.500	1.750	1.000	2.906	2.50	3.000	2.995	0.531	2232	50275	H-050	4.8
M-61-40-40												1/2-13				
M-04-48-48	3	5.156	5.313	2.438	4.188	2.120	1.250	3.547	3.00	3.625	3.615	0.656	2237	63300	H-063	8.0
M-61-48-48												5/8-11				

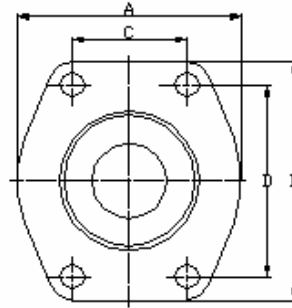
### Flat Socket Pipe

### SAE Code 62

Part. No.	PIPE SIZE	A	B	C	D	E	F	G	H	L MAX.	L MIN.	G/J DRILL /TAP UN-2B	Mounting KITS			WT
													O-RING Buna.N	BOLT SHCS	LW HC	
M-59-08-08	1/2	1.88	2.22	0.718	1.594	0.87	0.560	0.855	0.50	1.005	1.000	0.344	2210	31150	H-031	0.8
M-60-08-08												5/16-18				
M-59-12-12	3/4	2.38	2.81	0.937	2.000	1.25	0.560	1.062	0.75	1.255	1.250	0.406	2214	38200	H-038	1.2
M-60-12-12												3/8-16				
M-59-16-16	1	2.75	3.19	1.093	2.250	1.50	0.630	1.328	1.00	1.565	1.560	0.469	2219	44225	H-038	1.5
M-60-16-16												7/16-14				
M-59-20-20	1-1/4	3.06	3.75	1.250	2.625	1.50	0.690	1.672	1.25	1.755	1.750	0.531	2222	50250	H-044	2.0
M-60-20-20												1/2-13				
M-59-24-24	1-1/2	3.75	4.44	1.437	3.125	1.75	0.750	1.922	1.50	2.125	2.115	0.656	2225	63275	H-050	5.1
M-60-24-24												5/8-11				
M-59-32-32	2	4.50	5.25	1.750	3.812	1.75	0.875	2.406	2.00	2.500	2.490	0.781	2228	75300	H-050	6.8
M-60-32-32												3/4-10				
M-59-40-40	2-1/2	5.87	6.87	2.312	4.875	2.06	1.000	2.906	2.50	3.000	2.995	0.906	2232	88350	H-050	14.7
M-60-40-40												7/8-9				
M-59-48-48	3	7.00	8.50	2.812	6.000	2.62	1.250	3.547	3.00	3.625	3.615	1.156	2237	125450	H-063	27.8
M-60-48-48												1-1/8-7				



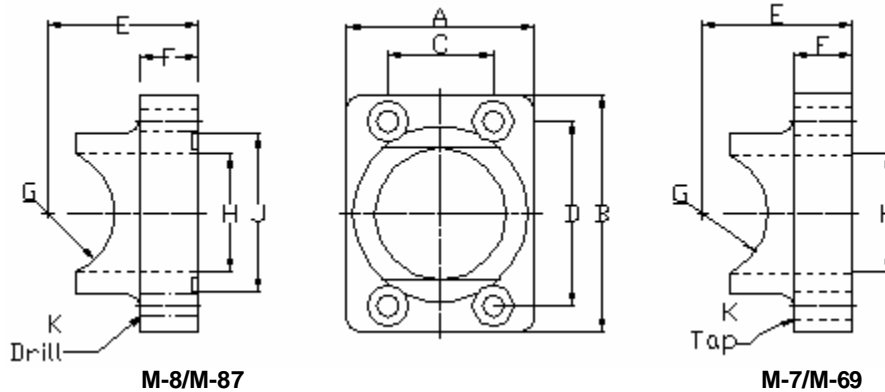
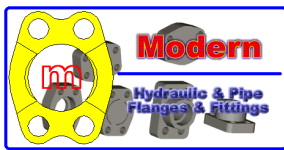
M-06/M-58



M-62/M-63

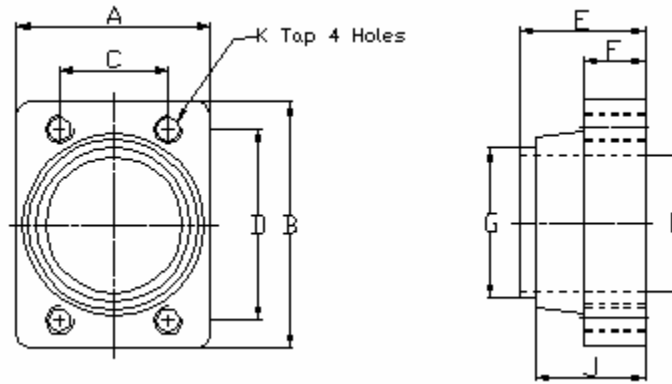
Flat Socket Tube													SAE Pattern Code 61		
Part. No.	Tube Size	A	B	C	D	E	F	G	H	J MAX.	J MIN.	K DRILL /TAP UN-2B	Mounting KITS		
													O-RING Buna.N	BOLT SHCS	LW HC
M-06-12-12	3/4	2.06	2.56	0.875	1.875	0.750	0.560	0.752	0.625	1.255	1.250	0.406	2214	38150	H-38
M-62-12-12												3/8-16			
M-06-16-12	1	2.06	2.56	0.875	1.875	0.750	0.560	1.002	0.750	1.255	1.250	0.406	2214	38150	H-38
M-62-16-12												3/8-16			
M-06-16-16	1	2.31	2.75	1.031	2.062	0.880	0.630	1.002	0.875	1.565	1.560	0.406	2224	38175	H-38
M-62-16-16												3/8-16			
M-06-20-16	1-1/4	2.31	2.75	1.031	2.062	0.880	0.630	1.252	1.000	1.565	1.560	0.406	2224	38175	H-38
M-62-20-16												3/8-16			
M-06-20-20	1-1/4	2.88	3.12	1.188	2.312	0.940	0.690	1.252	1.125	1.755	1.750	0.469	2222	44175	H-44
M-62-20-20												7/16-14			
M-06-24-20	1-1/2	2.88	3.12	1.188	2.312	0.940	0.690	1.502	1.250	1.755	1.750	0.469	2222	44175	H-44
M-62-24-20												7/16-14			
M-06-24-24	1-1/2	3.25	3.69	1.406	2.750	1.190	0.750	1.502	1.375	2.125	2.115	0.531	2225	50225	H-50
M-62-24-24												1/2-13			
M-06-28-24	1-3/4	3.25	3.69	1.406	2.750	1.190	0.750	1.752	1.500	2.125	2.115	0.531	2225	50225	H-50
M-62-28-24												1/2-13			
M-06-32-32	2	3.81	4.00	1.688	3.062	1.375	0.875	2.002	1.875	2.500	2.490	0.531	2228	50250	H-50
M-62-32-32												1/2-13			
M-06-36-32	2-1/4	3.81	4.00	1.688	3.062	1.375	0.875	2.252	2.000	2.500	2.490	0.531	2228	50250	H-50
M-62-36-32												1/2-13			

Flat Socket Tube													SAE Pattern Code 62		
Part. No.	Tube Size	A	B	C	D	E	F	G	H	J MAX.	J MIN.	K DRILL /TAP UN-2B	Mounting KITS		
													O-RING Buna.N	BOLT SHCS	LW HC
M-58-12-12	3/4	2.38	2.81	0.937	2.000	1.250	0.560	0.752	0.625	1.255	1.250	0.406	2214	38200	H-38
M-63-12-12												3/8-16			
M-58-16-12	1	2.38	2.81	0.937	2.000	1.250	0.560	1.002	0.750	1.255	1.250	0.406	2214	38200	H38
M-63-16-12												3/8-16			
M-58-16-16	1	2.75	3.19	1.093	2.250	1.500	0.630	1.002	0.875	1.565	1.560	0.469	2219	44225	H-44
M-63-16-16												7/16-14			
M-58-20-16	1-1/4	2.75	3.19	1.093	2.250	1.500	0.630	1.252	1.000	1.565	1.560	0.469	2219	44225	H-44
M-63-20-16												7/16-14			
M-58-20-20	1-1/4	3.06	3.75	1.250	2.625	1.500	0.690	1.252	1.125	1.755	1.750	0.531	2222	50250	H-50
M-63-20-20												1/2-13			
M-58-24-20	1-1/2	3.06	3.75	1.250	2.625	1.500	0.690	1.502	1.250	1.755	1.750	0.531	2222	50250	H-50
M-63-24-20												1/2-13			
M-58-24-24	1-1/2	3.75	4.44	1.437	3.125	1.750	0.750	1.502	1.375	2.125	2.115	0.656	2225	63275	H-63
M-63-24-24												5/8-11			
M-58-28-24	1-3/4	3.75	4.44	1.437	3.125	1.750	0.750	1.752	1.500	2.125	2.115	0.656	2225	63275	H-63
M-63-28-24												5/8-11			
M-58-32-32	2	4.50	5.25	1.750	3.812	1.750	0.875	2.002	1.875	2.500	2.490	0.781	2228	75300	H-75
M-63-32-32												3/4-10			
M-58-36-32	2	4.50	5.25	1.750	3.812	1.750	0.875	2.252	2.000	2.500	2.490	0.781	2228	75300	H-75
M-63-36-32												3/4-10			



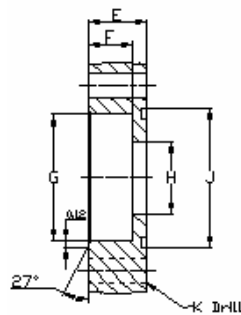
Saddle Pipe											SAE Pattern Code 61				
Part. No.	Pipe Size	A	B	C	D	E	F	G	H	J MAX.	J MIN.	K DRILL /TAP UN-2B	Mounting KITS		
													O-RING Buna.N	BOLT SHCS	LW HC
M-8-12-12	3/4	1.69	2.56	0.875	1.875	1.31	0.50	0.532	0.75	1.255	1.250	0.406	2214	38125	H-38
M-7-12-12												3/8-16			
M-8-16-16	1	1.94	2.75	1.031	2.062	1.50	0.56	0.665	1.00	1.565	1.560	0.406	2219	38125	H-38
M-7-16-16												3/8-16			
M-8-20-20	1-1/4	2.19	3.12	1.188	2.312	1.81	0.62	0.837	1.25	1.755	1.750	0.469	2222	44150	H-44
M-7-20-20												7/16-14			
M-8-24-24	1-1/2	2.56	3.69	1.406	2.750	2.12	0.81	0.957	1.50	2.125	2.115	0.531	2225	50175	H-50
M-7-24-24												1/2-13			
M-8-32-32	2	3.06	4.00	1.688	3.062	2.62	1.06	1.200	2.00	2.500	2.490	0.531	2228	50200	H-50
M-7-32-32												1/2-13			

Saddle Tube											SAE Pattern Code 61				
Part. No.	Tube Size	A	B	C	D	E	F	G	H	J MAX.	J MIN.	K DRILL /TAP UN-2B	Mounting KITS		
													O-RING Buna.N	BOLT SHCS	LW HC
M-87-12-12	3/4	1.69	2.56	0.875	1.875	1.06	0.50	0.382	0.75	1.255	1.250	0.406	2214	38150	H-38
M-69-12-12												3/8-16			
M-87-16-12	1	1.69	2.56	0.875	1.875	1.28	0.50	0.507	0.75	1.255	1.250	0.406	2214	38150	H-38
M-69-16-12												3/8-16			
M-87-20-12	1-1/4	1.69	2.56	0.875	1.875	1.38	0.50	0.632	0.75	1.565	1.560	0.406	2214	38150	H-38
M-69-20-12												3/8-16			
M-87-16-16	1	1.94	2.75	1.031	2.062	1.13	0.56	0.507	1.00	1.565	1.560	0.406	2219	38175	H-38
M-69-16-16												3/8-16			
M-87-20-16	1-1/4	1.94	2.75	1.031	2.062	1.44	0.56	0.632	1.00	1.565	1.560	0.406	2219	38175	H-38
M-69-20-16												3/8-16			
M-87-24-16	1-1/2	1.94	2.75	1.031	2.062	1.59	0.56	0.757	1.00	1.565	1.560	0.406	2219	38175	H-38
M-69-24-16												3/8-16			
M-87-20-20	1-1/4	2.19	3.12	1.188	2.312	1.38	0.62	0.632	1.25	1.565	1.560	0.469	2222	44175	H-44
M-69-20-20												7/16-14			
M-87-24-20	1-1/2	2.19	3.12	1.188	2.312	1.69	0.62	0.757	1.25	1.565	1.560	0.469	2222	44175	H-44
M-69-24-20												7/16-14			
M-87-32-20	2	2.19	3.12	1.188	2.312	2.00	0.62	1.007	1.25	1.565	1.560	0.469	2222	44175	H-44
M-69-32-20												7/16-14			
M-87-24-24	1-1/2	2.56	3.69	1.406	2.750	1.63	0.81	0.757	1.50	1.755	1.750	0.531	2225	50225	H-50
M-69-24-24												1/2-13			
M-87-28-24	1-3/4	2.56	3.69	1.406	2.750	2.00	0.81	0.882	1.50	2.125	2.115	0.531	2225	50225	H-50
M-69-28-24												1/2-13			
M-87-32-24	2	2.56	3.69	1.406	2.750	2.12	0.81	1.007	1.50	2.500	2.490	0.531	2225	50225	H-50
M-69-32-24												1/2-13			
M-87-32-32	2	3.06	4.00	1.688	3.062	2.12	1.06	1.007	2.00	1.565	1.560	0.531	2228	50250	H-50
M-69-32-32												1/2-13			
M-87-36-32	2-1/4	3.06	4.00	1.688	3.062	2.44	1.06	1.132	2.00	1.565	1.560	0.531	2228	50250	H-50
M-69-36-32												1/2-13			

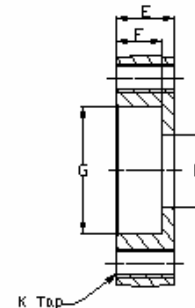
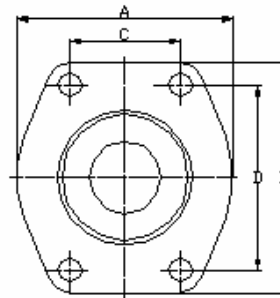


M-22

Tank Pilot SAE Pattern Code 61											
Part. No.	Flange Size	A	B	C	D	E	F	G	H	J	K
M-22-12-12	3/4	1.69	2.56	0.875	1.875	1.06	0.50	1.375	0.750	0.94	3/8-16
M-22-16-16	1	1.94	2.75	1.031	2.062	1.25	0.56	1.500	1.002	1.12	7/16-14
M-22-20-20	1-1/4	2.19	3.12	1.188	2.312	1.44	0.62	1.750	1.252	1.31	1/2-13
M-22-24-24	1-1/2	2.56	3.69	1.406	2.750	1.75	0.81	2.125	1.502	1.62	1/2-13
M-22-32-32	2	3.06	4.00	1.688	3.062	2.00	1.06	2.500	2.002	1.88	1/2-13
M-22-40-40	2-1/2	3.56	4.50	2.000	3.500	2.31	1.12	3.500	2.502	2.19	1/2-13

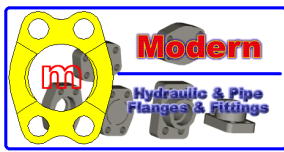


M-71



M-90

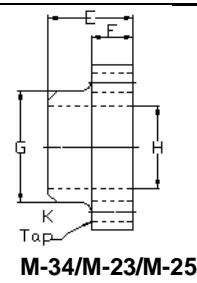
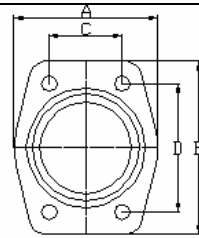
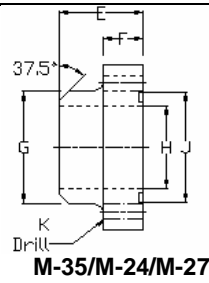
500Psi Flat Socket-Tube SAE Pattern												Mounting KITS			
Part. No.	Tube Size	A	B	C	D	E	F	G	H	J MAX.	J MIN.	K DRILL /TAP UN-2B	O-RING	BOLT	LW
													Buna.N	SHCS	HC
M-71-48-48	3	5.12	5.31	2.438	4.188	1.380	1.12	3.002	2.875	3.625	3.615	0.656	2237	63250	H-63
M-90-48-48													5/8-11		
M-71-56-48	3	5.12	5.31	2.438	4.188	1.380	1.12	3.502	3.000	3.625	3.615	0.656	2237	63250	H-63
M-90-56-48													5/8-11		
M-71-56-56	3-1/2	5.50	6.00	2.750	4.750	1.440	1.19	3.502	3.375	4.115	4.095	0.656	2241	63250	H-63
M-90-56-56													5/8-11		
M-71-64-56	3-1/2	5.50	6.00	2.750	4.750	1.440	1.19	4.002	3.500	4.115	4.095	0.656	2241	63250	H-63
M-90-64-56													5/8-11		
M-71-64-64	4	6.00	6.38	3.062	5.125	1.500	1.25	4.002	3.875	4.615	4.595	0.656	2245	63275	H-63
M-90-64-64													5/8-11		
M-71-72-64	4	6.00	6.38	3.062	5.125	1.500	1.25	4.502	4.000	4.615	4.595	0.656	2245	63275	H-63
M-90-72-64													5/8-11		
M-71-80-80	5	7.12	7.25	3.625	6.000	1.750	1.38	5.002	4.875	5.615	5.595	0.656	2253	63300	H-63
M-90-80-80													5/8-11		



# Modern Flanges

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## Butt Weld Sch. 40 Pipe

SAE Pattern Code 61

Part. No.	Pipe Size	A	B	C	D	E	F	G	H	J MAX.	J MIN.	K DRILL /TAP UN-2B	Mounting KITS		
													O-RING Buna.N	BOLT SHCS	LW HC
M-35-12	3/4	1.69	2.56	0.875	1.875	1.06	0.50	1.050	0.82	1.255	1.250	0.406	2214	38150	H-38
M-34-12												3/8-16			
M-35-16	1	1.94	2.75	1.031	2.062	1.25	0.56	1.315	1.04	1.565	1.560	0.406	2219	38175	H-38
M-34-16												3/8-16			
M-35-20	1-1/4	2.19	3.12	1.188	2.312	1.44	0.62	1.660	1.38	1.755	1.750	0.469	2222	44175	H-44
M-34-20												7/16-14			
M-35-24	1-1/2	2.56	3.69	1.406	2.750	1.75	0.81	1.900	1.61	2.125	2.115	0.531	2225	50225	H-50
M-34-24												1/2-13			
M-35-32	2	3.06	4.00	1.688	3.062	2.00	1.06	2.375	2.06	2.500	2.490	0.531	2228	50250	H-50
M-34-32												1/2-13			
M-35-40	2-1/2	3.56	4.50	2.000	3.500	2.50	1.12	2.875	2.46	2.500	2.490	0.531	2232	50275	H-50
M-34-40												1/2-13			
M-35-48	3	4.50	5.31	2.438	4.188	2.32	1.50	3.500	3.06	23.005	2.995	0.656	2237	63300	H-63
M-34-48												5/8-11			

## Butt Weld Sch. 80 Pipe

SAE Pattern Code 61

Part. No.	Pipe Size	A	B	C	D	E	F	G	H	J MAX.	J MIN.	K DRILL /TAP UN-2B	Mounting KITS		
													O-RING Buna.N	BOLT SHCS	LW HC
M-24-12	3/4	1.69	2.56	0.875	1.875	1.06	0.50	1.050	0.742	1.255	1.250	0.406	2214	38150	H-38
M-23-12												3/8-16			
M-24-16	1	1.94	2.75	1.031	2.062	1.25	0.56	1.315	0.957	1.565	1.560	0.406	2219	38175	H-38
M-23-16												3/8-16			
M-24-20	1-1/4	2.19	3.12	1.188	2.312	1.44	0.62	1.660	1.278	1.755	1.750	0.469	2222	44175	H-44
M-23-20												7/16-14			
M-24-24	1-1/2	2.56	3.69	1.406	2.750	1.75	0.81	1.900	1.500	2.125	2.115	0.531	2225	50225	H-50
M-23-24												1/2-13			
M-24-32	2	3.06	4.00	1.688	3.062	2.00	1.06	2.375	1.939	2.500	2.490	0.531	2228	50250	H-50
M-23-32												1/2-13			
M-24-40	2-1/2	3.56	4.50	2.000	3.500	2.50	1.12	2.875	2.323	2.500	2.490	0.531	2232	50275	H-50
M-23-40												1/2-13			
M-24-48	3	4.50	5.31	2.438	4.188	2.32	1.50	3.500	2.900	23.005	2.995	0.656	2237	63300	H-63
M-23-48												5/8-11			

## Butt Weld Sch. 160 Pipe

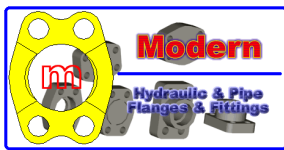
SAE Pattern Code 61

Part. No.	Pipe Size	A	B	C	D	E	F	G	H	J MAX.	J MIN.	K DRILL /TAP UN-2B	Mounting KITS		
													O-RING Buna.N	BOLT SHCS	LW HC
M-27-12	3/4	1.69	2.56	0.875	1.875	1.06	0.50	1.050	0.614	1.255	1.250	0.406	2214	38150	H-38
M-25-12												3/8-16			
M-27-16	1	1.94	2.75	1.031	2.062	1.25	0.56	1.315	0.815	1.565	1.560	0.406	2219	38175	H-38
M-25-16												3/8-16			
M-27-20	1-1/4	2.19	3.12	1.188	2.312	1.44	0.62	1.660	1.160	1.755	1.750	0.469	2222	44175	H-44
M-25-20												7/16-14			
M-27-24	1-1/2	2.56	3.69	1.406	2.750	1.75	0.81	1.900	1.337	2.125	2.115	0.531	2225	50225	H-50
M-25-24												1/2-13			
M-27-32	2	3.06	4.00	1.688	3.062	2.00	1.06	2.375	1.689	2.500	2.490	0.531	2228	50250	H-50
M-25-32												1/2-13			
M-27-40	2-1/2	3.56	4.50	2.000	3.500	2.50	1.12	2.875	2.125	2.500	2.490	0.531	2232	50275	H-50
M-25-40												1/2-13			
M-27-48	3	4.50	5.31	2.438	4.188	2.32	1.50	3.500	2.624	23.005	2.995	0.656	2237	63300	H-63
M-25-48												5/8-11			

Dalian Modern Machinery Co., Ltd.

4 Ying Chun Street Dalian, China 116021

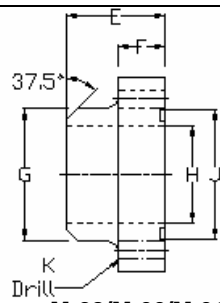
Phone: 86+411-4315638, Fax: 86+411-4319677 URL: <http://www.modernflanges.com>



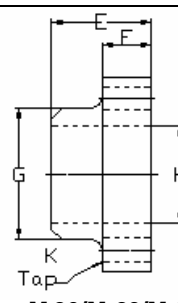
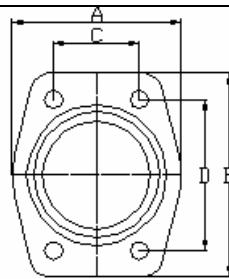
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M-28/M-30/M-33

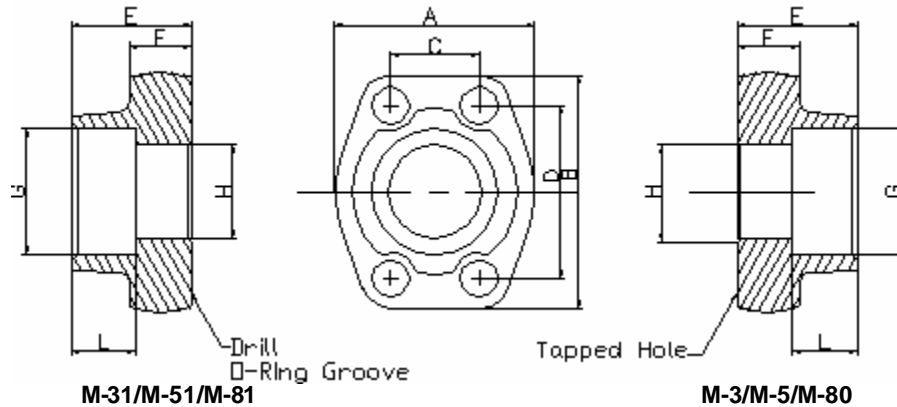
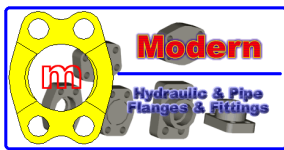


M-26/M-29/M-32

Butt Weld Sch. 80 Pipe													SAE Pattern Code 62		
Part. No.	Pipe Size	A	B	C	D	E	F	G	H	J MAX.	J MIN.	K DRILL /TAP UN-2B	Mounting KITS		
													O-RING Buna.N	BOLT SHCS	LW HC
M-28-12	3/4	1.94	2.81	0.875	0.937	1.42	0.83	1.050	0.742	1.255	1.250	0.406	2214	38175	H-38
M-26-12												3/8-16			
M-28-16	1	2.18	3.19	1.031	1.093	1.61	0.83	1.315	0.957	1.565	1.560	0.469	2219	44175	H-44
M-26-16												7/16-14			
M-28-20	1-1/4	2.44	3.75	1.188	1.250	1.73	0.94	1.660	1.278	1.755	1.750	0.531	2222	50225	H-50
M-26-20												1/2-13			
M-28-24	1-1/2	2.81	4.44	1.406	1.437	2.17	1.10	1.900	1.500	2.125	2.115	0.656	2225	63250	H-63
M-26-24												5/8-11			
M-28-32	2	3.44	5.25	1.688	1.750	2.48	1.46	2.375	1.939	2.500	2.490	0.781	2228	75275	H-75
M-26-32												3/4-10			
M-28-40	2-1/2	5.00	6.88	2.000	2.312	2.37	1.50	2.875	2.323	2.500	2.490	0.940	2232	88300	H-88
M-26-40												7/8-9			
M-28-48	3	6.00	8.50	2.438	2.812	2.96	2.00	3.500	2.900	23.005	2.995	1.190	2237	112400	H-112
M-26-48												1-1/8-7			

Butt Weld Sch. 160 Pipe													SAE Pattern Code 62		
Part. No.	Pipe Size	A	B	C	D	E	F	G	H	J MAX.	J MIN.	K DRILL /TAP UN-2B	Mounting KITS		
													O-RING Buna.N	BOLT SHCS	LW HC
M-30-12	3/4	1.94	2.81	0.875	0.937	1.42	0.83	1.050	0.614	1.255	1.250	0.406	2214	38175	H-38
M-29-12												3/8-16			
M-30-16	1	2.18	3.19	1.031	1.093	1.61	0.83	1.315	0.815	1.565	1.560	0.469	2219	44175	H-44
M-29-16												7/16-14			
M-30-20	1-1/4	2.44	3.75	1.188	1.250	1.73	0.94	1.660	1.160	1.755	1.750	0.531	2222	50225	H-50
M-29-20												1/2-13			
M-30-24	1-1/2	2.81	4.44	1.406	1.437	2.17	1.10	1.900	1.337	2.125	2.115	0.656	2225	63250	H-63
M-29-24												5/8-11			
M-30-32	2	3.44	5.25	1.688	1.750	2.48	1.46	2.375	1.689	2.500	2.490	0.781	2228	75275	H-75
M-29-32												3/4-10			
M-30-40	2-1/2	5.00	6.88	2.000	2.312	2.37	1.50	2.875	2.125	2.500	2.490	0.940	2232	88300	H-88
M-29-40												7/8-9			
M-30-48	3	6.00	8.50	2.438	2.812	2.96	2.00	3.500	2.624	23.005	2.995	1.190	2237	112400	H-112
M-29-48												1-1/8-7			

Butt Weld Sch. XXS. Pipe													SAE Pattern Code 62		
Part. No.	Pipe Size	A	B	C	D	E	F	G	H	J MAX.	J MIN.	K DRILL /TAP UN-2B	Mounting KITS		
													O-RING Buna.N	BOLT SHCS	LW HC
M-33-12	3/4	1.94	2.81	0.875	0.937	1.42	0.83	1.050	0.434	1.255	1.250	0.406	2214	38175	H-38
M-32-12												3/8-16			
M-33-16	1	2.18	3.19	1.031	1.093	1.61	0.83	1.315	0.599	1.565	1.560	0.469	2219	44175	H-44
M-32-16												7/16-14			
M-33-20	1-1/4	2.44	3.75	1.188	1.250	1.73	0.94	1.660	0.896	1.755	1.750	0.531	2222	50225	H-50
M-32-20												1/2-13			
M-33-24	1-1/2	2.81	4.44	1.406	1.437	2.17	1.10	1.900	1.100	2.125	2.115	0.656	2225	63250	H-63
M-32-24												5/8-11			
M-33-32	2	3.44	5.25	1.688	1.750	2.48	1.46	2.375	1.503	2.500	2.490	0.781	2228	75275	H-75
M-32-32												3/4-10			
M-33-40	2-1/2	5.00	6.88	2.000	2.312	2.37	1.50	2.875	1.771	2.500	2.490	0.940	2232	88300	H-88
M-32-40												7/8-9			
M-33-48	3	6.00	8.50	2.438	2.812	2.96	2.00	3.500	2.300	23.005	2.995	1.190	2237	112400	H-112
M-32-48												1-1/8-7			



### Deep Socket Pipe

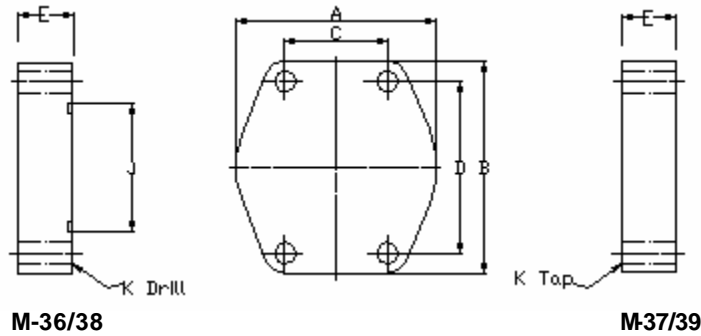
SAE Pattern Code 61

Part. No.	Pipe Size	A	B	C	D	E	F	G	H	L	J MAX.	J MIN.	K DRILL /TAP UN-2B	Mounting KITS		
														O-RING Buna.N	BOLT SHCS	LW HC
M-31-12-12	3/4	1.69	2.56	0.875	1.875	1.06	0.50	1.062	0.750	0.56	1.255	1.250	0.406	2214	38150	H-38
M-03-12-12													53/8-16			
M-31-16-16	1	1.94	2.75	1.031	2.062	1.25	0.56	1.328	1.000	0.63	1.565	1.560	0.406	2219	38175	H-38
M-03-16-16													3/8-16			
M-31-20-20	1-1/4	2.19	3.12	1.188	2.312	1.44	0.62	1.672	1.250	0.69	1.755	1.750	0.469	2222	44175	H-44
M-03-20-20													7/16-14			
M-31-24-24	1-1/2	2.56	3.69	1.406	2.750	1.75	0.81	1.922	1.500	0.75	2.125	2.115	0.531	2225	50225	H-50
M-03-24-24													1/2-13			
M-31-32-32	2	3.06	4.00	1.688	3.062	2.00	1.06	2.406	2.000	0.88	2.500	2.490	0.531	2228	50250	H-50
M-03-32-32													1/2-12			
M-31-40-40	2-1/2	3.56	4.50	2.000	3.500	2.31	1.12	2.906	2.500	1.00	3.000	2.995	0.531	2232	50275	H-50
M-03-40-40													1/2-13			

### Deep Socket Pipe

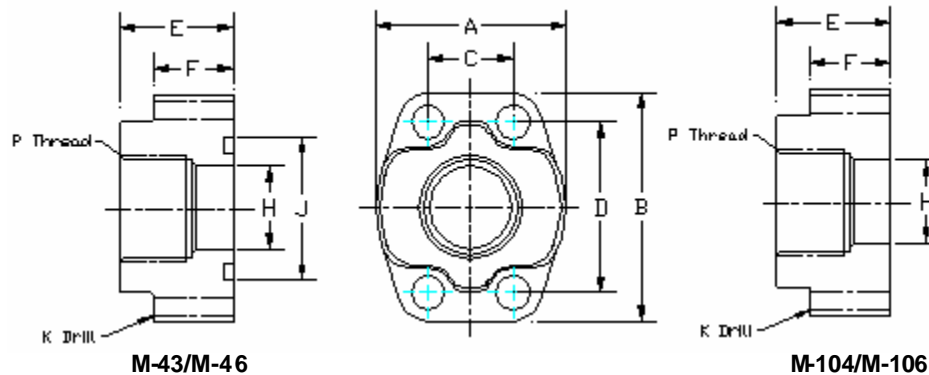
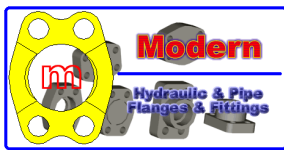
SAE Pattern Code 62

Part. No.	Pipe Size	A	B	C	D	E	F	G	H	L	J MAX.	J MIN.	K DRILL /TAP UN-2B	Mounting KITS		
														O-RING Buna.N	BOLT SHCS	LW HC
M-81-12-12	3/4	1.94	2.81	0.937	2.000	1.42	0.83	1.062	0.750	0.56	1.255	1.250	0.406	2214	38150	H-38
M-80-12-12													3/8-16			
M-81-16-16	1	2.18	3.19	1.093	2.250	1.61	0.83	1.328	1.000	0.63	1.565	1.560	0.469	2219	44150	H-44
M-80-16-16													7/16-14			
M-81-20-20	1-1/4	2.44	3.75	1.250	2.625	1.73	0.94	1.672	1.250	0.69	1.755	1.750	0.531	2222	50200	H-50
M-80-20-20													1/2-13			
M-81-24-24	1-1/2	2.81	4.44	3.125	3.125	2.17	1.10	1.922	1.500	0.75	2.125	2.115	0.656	2225	63225	H-63
M-80-24-24													5/8-11			
M-81-32-32	2	3.44	5.25	3.812	3.812	2.48	1.46	2.406	2.000	0.88	2.500	2.490	0.781	2228	75275	H-75
M-80-32-32													3/4-10			



Blanking										SAE Pattern Code 61		
Part. No.	Pipe Size	A	B	C	D	E	J MAX.	J MIN.	K DRILL /TAP UN-2B	Mounting KITS		
										O-RING Buna.N	BOLT SHCS	LW HC
M-36-08-08	1/2	1.813	2.125	0.688	1.500	0.690	1.005	1.000	0.406	2210	31150	H-31
M-37-08-08									3/8-16			
M-36-12-12	3/4	2.063	2.563	0.875	1.875	0.750	1.255	1.250	0.406	2214	38150	H-38
M-37-12-12									3/8-16			
M-36-16-16	1	2.313	2.750	1.031	2.063	0.880	1.565	1.560	0.406	2219	38175	H-38
M-37-16-16									3/8-16			
M-36-20-20	1-1/4	2.875	3.125	1.188	2.313	0.940	1.755	1.750	0.469	2222	44175	H-44
M-37-20-20									7/16-14			
M-36-24-24	1-1/2	3.250	3.688	1.406	2.750	1.190	2.125	2.115	0.531	2225	50225	H-50
M-37-24-24									1/2-13			
M-36-32-32	2	3.813	4.000	1.688	3.063	1.380	1.255	1.250	0.531	2228	50250	H-50
M-37-32-32									1/2-13			
M-36-40-40	2-1/2	4.281	4.500	2.000	3.500	1.750	1.255	1.250	0.656	2232	50275	H-50
M-37-40-40									1/2-13			
M-36-48-48	3	5.156	5.313	2.438	4.188	2.120	3.625	3.615	0.656	2237	63300	H-63
M-37-48-48									5/8-11			

Blanking										SAE Pattern Code 62		
Part. No.	Pipe Size	A	B	C	D	E	J MAX.	J MIN.	K DRILL /TAP UN-2B	Mounting KITS		
										O-RING Buna.N	BOLT SHCS	LW HC
M-38-12-12	3/4	2.380	2.810	0.937	2.000	1.250	1.255	1.250	0.406	2214	38200	H-38
M-39-12-12									3/8-16			
M-38-16-16	1	2.750	3.190	1.093	2.250	1.500	1.565	1.560	0.469	2219	44225	H-44
M-39-16-16									7/16-14			
M-38-20-20	1-1/4	3.060	3.750	1.250	2.625	1.500	1.755	1.750	0.531	2222	50250	H-50
M-39-20-20									1/2-13			
M-38-24-24	1-1/2	3.750	4.440	1.437	3.125	1.750	2.125	2.115	0.656	2225	63275	H-63
M-39-24-24									5/8-11			
M-38-32-32	2	4.50	5.25	1.750	3.812	1.750	2.500	2.490	0.781	2228	75300	H-75
M-39-32-32									3/4-10			

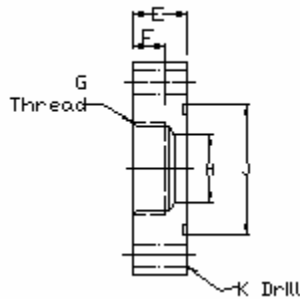
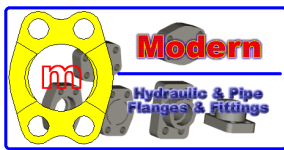


NPTF Thread													SAE Pattern 61			WT
Part. No.	Pipe Size	A	B	C	D	E	F	G NPTF Thread	H	J MAX.	J MIN.	K DRILL /TAP UN-2B	Mounting KITS			
													O-RING Buna.N	BOLT SHCS	LW HC	
M-43-08-08	1/2	1.81	2.12	0.688	1.500	1.25	0.91	1/2	0.50	1.005	1.000	0.344	2210	31150	H-31	0.8
M-104-08-08												5/16-18				
M-43-12-12	3/4	2.06	2.56	0.875	1.875	1.25	0.84	3/4	0.75	1.255	1.250	0.406	2214	38150	H-38	1.0
M-104-12-12												3/8-16				
M-43-16-16	1	2.31	2.75	1.031	2.062	1.38	0.97	1	1.00	1.565	1.560	0.406	2219	38175	H-38	1.4
M-104-16-16												3/8-16				
M-43-20-20	1-1/4	2.88	3.12	1.188	2.312	1.50	1.03	1-1/4	1.25	1.755	1.750	0.469	2222	44175	H-44	2.0
M-104-20-20												7/16-14				
M-43-24-24	1-1/2	3.25	3.69	1.406	2.750	1.62	1.09	1-1/2	1.50	2.125	2.115	0.531	2225	50200	H-50	2.9
M-104-24-24												1/2-13				
M-43-32-32	2	3.81	4.00	1.688	3.062	1.62	1.09	2	2.00	2.500	2.490	0.531	2228	50200	H-50	3.5
M-104-32-32												1/2-13				
M-43-40-40	2-1/2	4.28	4.50	2.000	3.500	2.00	1.47	2-1/2	2.50	3.005	2.995	0.531	2232	50250	H-50	5.5
M-104-40-40												1/2-13				
M-43-48-48	3	5.16	5.31	2.438	4.188	2.25	1.59	3	3.00	3.625	3.615	0.656	2237	63275	H-63	8.2
M-104-48-48												5/8-11				

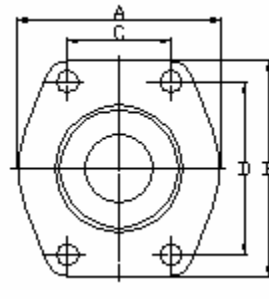
S.A.E. Straight Thread													SAE Pattern 61			WT
Part. No.	Pipe Size	A	B	C	D	E	F	G UN/UNF Thread	H	J MAX.	J MIN.	K DRILL /TAP UN-2B	Mounting KITS			
													O-RING Buna.N	BOLT SHCS	LW HC	
M-46-08-08	1/2	1.81	2.12	0.688	1.500	1.25	0.91	3/4-16	0.50	1.005	1.000	0.344	2210	31150	H-31	0.8
M-106-08-08												5/16-18				
M-46-12-12	3/4	2.06	2.56	0.875	1.875	1.25	0.84	1-1/16-12	0.75	1.255	1.250	0.406	2214	38150	H-38	1.0
M-106-12-12												3/8-16				
M-46-16-16	1	2.31	2.75	1.031	2.062	1.38	0.97	1-5/16-12	1.00	1.565	1.560	0.406	2219	38150	H-38	1.5
M-106-16-16												3/8-16				
M-46-20-20	1-1/4	2.88	3.12	1.188	2.312	1.50	1.03	1-5/8-12	1.25	1.755	1.750	0.469	2222	44175	H-44	2.0
M-106-20-20												7/16-14				
M-46-24-24	1-1/2	3.25	3.69	1.406	2.750	1.62	1.09	1-7/8-12	1.50	2.125	2.115	0.531	2225	50200	H-50	2.9
M-106-24-24												1/2-13				

Metric Option is available for all these items by adding "M" as M43M-08-08, Jump sizes are available upon request

When adding "K" before the part number you will receive flange with mounting kits which includes (1) flange, (4) socket head bolts and (4) lock washers as well as 1 Buna. N 90 O-Ring

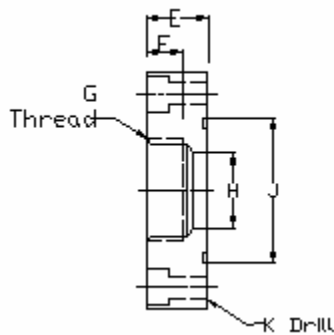


M-44

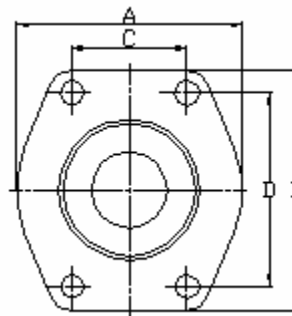


M-45

Part. No.	Pipe Size	NPTF Thread										SAE Pattern 62			
		A	B	C	D	E	F MIN	G NPTF Thread	H	J MAX.	J MIN.	K DRILL /TAP UN-2B	Mounting KITS		
													O-RING Buna.N	BOLT SHCS	LW HC
M-44-12-12	3/4	2.38	2.81	0.937	2.000	1.25	0.760	3/4	0.75	1.255	1.250	0.406	2214	38200	H-38
M-45-12-12												3/8-16			
M-44-16-16	1	2.75	3.19	1.093	2.250	1.50	0.922	1	1.00	1.565	1.560	0.469	2219	44225	H-44
M-45-16-16												7/16-14			
M-44-20-20	1-1/4	3.06	3.75	1.250	2.625	1.50	0.940	1-1/4	1.25	1.755	1.750	0.531	2222	50250	H-50
M-45-20-20												1/2-13			
M-44-24-24	1-1/2	3.75	4.44	1.437	3.125	1.75	0.940	1-1/2	1.50	2.125	2.115	0.656	2225	63275	H-63
M-45-24-24												5/8-11			
M-44-32-32	2	4.50	5.25	1.750	3.812	1.75	0.957	2	2.00	2.500	2.490	0.781	2228	75300	H-75
M-45-32-32												3/4-10			

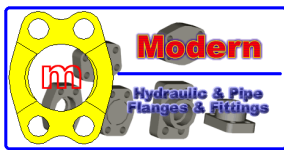


M-48

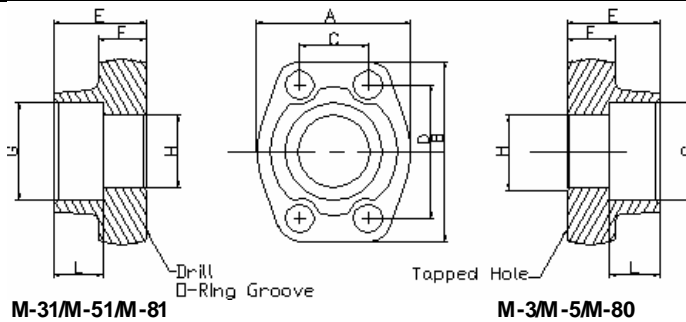


M-49

Part. No.	Pipe Size	S.A.E. Straight Thread										SAE Pattern 62			
		A	B	C	D	E	F	G UNC-2B Thread	H	J MAX.	J MIN.	K DRILL /TAP UN-2B	Mounting KITS		
													O-RING Buna.N	BOLT SHCS	LW HC
M-48-12-12	3/4	2.38	2.81	0.937	2.000	1.25	0.750	1-1/16-12	0.75	1.255	1.250	0.406	2214	38137	H-38
M-49-12-12												3/8-16			
M-48-16-16	1	2.75	3.19	1.093	2.250	1.50	0.750	1-5/16-12	1.00	1.565	1.560	0.469	2219	44150	H-44
M-49-16-16												7/16-14			
M-48-20-20	1-1/4	3.06	3.75	1.250	2.625	1.50	0.750	1-5/8-12	1.25	1.755	1.750	0.531	2222	50150	H-50
M-49-20-20												1/2-13			
M-48-24-24	1-1/2	3.75	4.44	1.437	3.125	1.75	0.750	1-7/8-12	1.50	2.125	2.115	0.656	2225	63175	H-63
M-49-24-24												5/8-11			
M-48-32-32	2	4.50	5.25	1.750	3.812	1.75	0.750	2-1/2-12	2.00	2.500	2.490	0.781	2228	75200	H-75
M-49-32-32												3/4-10			



Modern is always touching the Future!



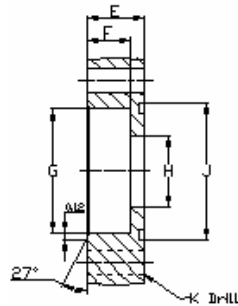
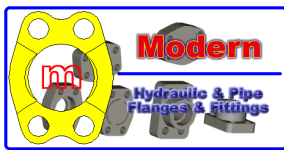
M-31/M-51/M-81

M-3/M-5/M-80

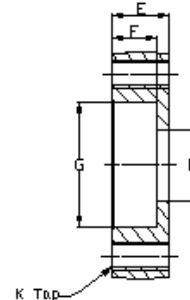
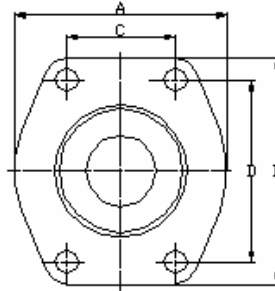
Deep Socket Tube												SAE Pattern Code 61		
Part. No.	Tube Size	A	B	C	D	E	G	H	J MAX.	J MIN.	K DRILL /TAP UN-2B	Mounting KITS		
												O-RING Buna.N	BOLT SHCS	LW HC
M-51-12-12	3/4	1.69	2.56	0.875	1.875	1.06	0.752	0.625	1.255	1.250	0.406	2214	38150	H-38
M-5-12-12											3/8-16			
M-51-16-12	1	1.69	2.56	0.875	1.875	1.06	1.002	0.750	1.255	1.250	0.406	2214	38150	H-38
M-5-16-12											3/8-16			
M-51-16-16	1	1.94	2.75	1.031	2.062	1.25	1.002	0.875	1.565	1.560	0.406	2219	38175	H-38
M-5-16-16											3/8-16			
M-51-20-16	1-1/4	1.94	2.75	1.031	2.062	1.25	1.252	1.000	1565	1.560	0.406	2219	38175	H-38
M-5-20-16											3/8-16			
M-51-20-20	1-1/4	2.19	3.12	1.188	2.312	1.44	1.252	1.125	1.755	1.750	0.469	2222	44175	H-44
M-5-20-20											7/16-14			
M-51-24-20	1-1/2	2.19	3.12	1.188	2.312	1.44	1.502	1.250	1.755	1.750	0.469	2222	44175	H-44
M-5-24-20											7/16-14			
M-51-24-24	1-1/2	2.56	3.69	1.406	2.750	1.75	1.502	1.375	2.125	2.115	0.531	2225	50225	H-50
M-5-24-24											1/2-13			
M-51-28-24	1-3/4	2.56	3.69	1.406	2.750	1.75	1.752	1.500	2.125	2.115	0.531	2225	50225	H-50
M-5-28-24											1/2-13			
M-51-32-32	2	3.06	4.00	1.688	3.062	2.00	2.002	1.875	2.500	2.490	0.531	2228	50250	H-50
M-5-32-32											1/2-13			
M-51-36-32	2-1/4	3.06	4.00	1.688	3.062	2.00	2.252	2.000	2.500	2.490	0.531	2228	50250	H-50
M-5-36-32											1/2-13			
M-51-40-40	2-1/2	3.56	4.50	2.000	3.500	2.31	2.502	2.375	3.005	2.995	0.531	2232	50275	H-50
M-5-40-40											1/2-13			
M-51-44-40	2-3/4	3.56	4.50	2.000	3.500	2.31	2.752	2.500	3.005	2.995	0.531	2232	50275	H-50
M-5-44-40											1/2-13			

Deep Socket Tube												SAE Pattern Code 62		
Part. No.	Tube Size	A	B	C	D	E	G	H	J MAX.	J MIN.	K DRILL /TAP UN-2B	Mounting KITS		
												O-RING Buna.N	BOLT SHCS	LW HC
M-83-12-12	3/4	1.94	2.81	0.937	2.000	1.42	0.752	0.625	1.255	1.250	0.406	2214	38150	H-38
M-82-12-12											3/8-16			
M-83-16-12	1	1.94	2.81	0.937	2.000	1.42	1.002	0.750	1.255	1.250	0.406	2214	38150	H-38
M-82-16-12											3/8-16			
M-83-16-16	1	2.18	3.19	1.093	2.250	1.61	1.002	0.875	1.565	1.560	0.469	2219	44150	H-44
M82-16-16											7/16-14			
M-83-20-16	1-1/4	2.18	3.19	1.093	2.250	1.61	1.252	1.000	1565	1.560	0.469	2219	44150	H-44
M-83-20-16											7/16-14			
M-83-20-20	1-1/4	2.44	3.75	1.250	2.625	1.73	1.252	1.125	1.755	1.750	0.531	2222	50200	H-50
M-82-20-20											1/2-13			
M-83-24-20	1-1/2	2.44	3.75	1.250	2.625	1.73	1.502	1.250	1.755	1.750	0.531	2222	50200	H-50
M-82-24-20											1/2-13			
M-83-24-24	1-1/2	2.81	4.44	1.437	3.125	2.17	1.502	1.375	2.125	2.115	0.656	2225	63225	H-63
M-82-24-24											5/8-11			
M-83-28-24	1-3/4	2.81	4.44	1.437	3.125	2.17	1.752	1.500	2.125	2.115	0656	2225	63225	H-63
M-82-28-24											5/8-11			
M-83-32-32	2	3.44	5.25	1.750	3.812	2.48	2.002	1.875	2.500	2.490	0.781	2228	75275	H-75
M-82-32-32											3/4-10			
M-83-36-32	2-1/4	3.44	5.25	1.750	3.812	2.48	2.252	2.000	2.500	2.490	0.781	2228	75275	H-75
M-82-36-32											3/4-10			

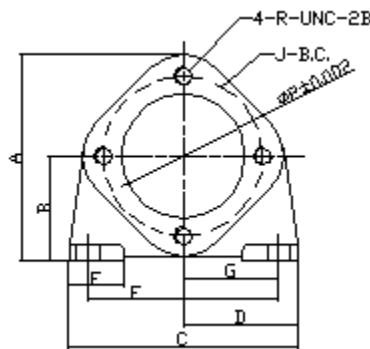
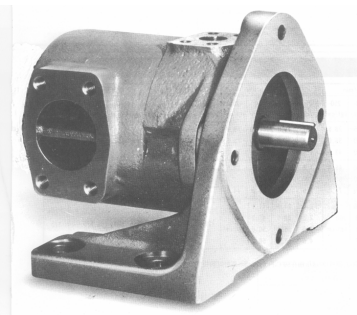


M-72

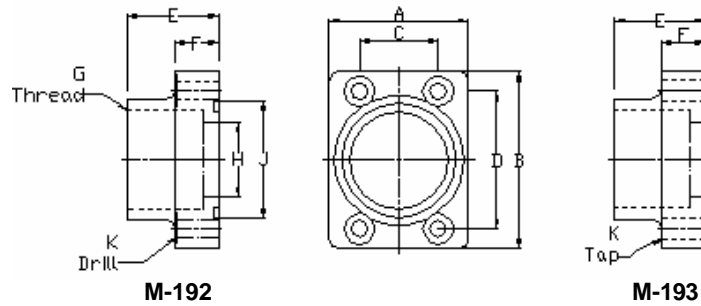


M-91

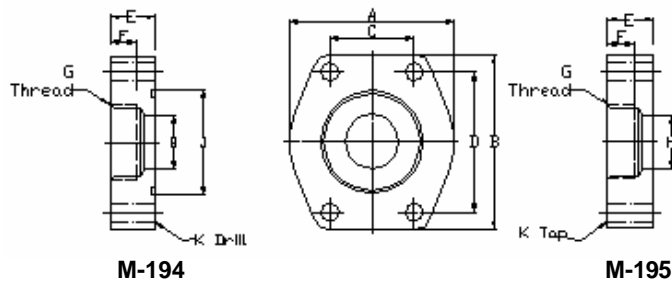
500Psi Flat Socket Pipe												SAE Pattern			
Part. No.	Pipe Size	A	B	C	D	E	F	G	H	J MAX.	J MIN.	K DRILL /TAP UN-2B	Mounting KITS		
													O-RING Buna.N	BOLT SHCS	LW HC
M-72-48-48	3	5.12	5.31	2.438	4.188	1.380	1.12	3.547	3.002	3.625	3.615	0.656	2237	63250	H-63
M-91-48-48												5/8-11			
M-72-40-56	2-1/2	5.50	6.00	2.750	4.750	1.440	1.00	2.906	2.502	4.115	4.095	0.656	2241	63250	H-63
M-91-40-56												5/8-11			
M-72-48-56	3	5.50	6.00	2.750	4.750	1.440	1.12	3.547	3.002	4.115	4.095	0.656	2241	63250	H-63
M-91-48-56												5/8-11			
M-72-56-56	3-1/2	5.50	6.00	2.750	4.750	1.440	1.19	4.047	3.502	4.115	4.095	0.656	2241	63250	H-63
M-91-56-56												5/8-11			
M-72-24-64	1-1/2	6.00	6.38	3.062	5.125	1.400	1.25	1.922	1.502	4.615	4.595	0.656	2245	63250	H-63
M-91-24-64												5/8-11			
M-72-32-64	2	6.00	6.38	3.062	5.125	1.400	1.25	2.406	2.002	4.615	4.595	0.656	2245	63250	H-63
M-91-32-64												5/8-11			
M-72-64-64	4	6.00	6.38	3.625	5.125	1.500	1.25	4.578	4.002	4.615	4.595	0.656	2253	63275	H-63
M-91-64-64												5/8-11			
M-72-80-80	5	7.12	7.25	3.625	6.000	1.750	1.38	5.641	5.002	5.615	5.595	0.656	2253	63300	H-63
M-91-80-80												5/8-11			



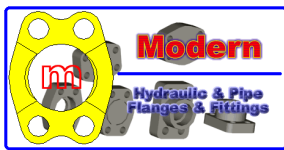
Hydraulic Brackets														SAE Pattern			
Part. No.	A	B	C	D	E	F	G	H	J	K	M	N	O	P	Q	R UNC-2B	WT
M-B-A	5.31	2.75	6.00	3.00	5.00	1.44	2.50	0.50	4.188	3.78	0.59	2.00	0.50	3.253	0.69	3/8-16	4
M-B-B	7.12	3.63	6.75	3.38	5.75	1.44	2.88	0.50	5.750	3.77	0.59	2.00	0.50	4.003	0.68	1/2-13	5
M-B-C	8.50	4.31	10.44	5.22	9.25	2.00	4.63	0.62	7.130	5.18	0.75	3.00	0.68	5.003	0.75	5/8-11	12



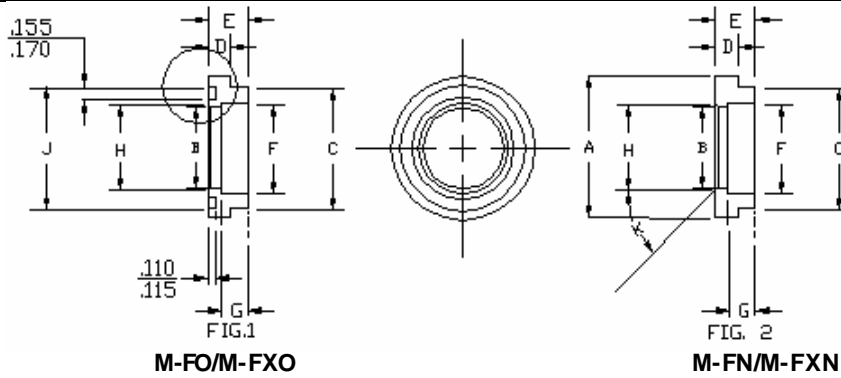
B.S.P.P. Thread												SAE Pattern 61			
Part. No.	Pipe Size	A	B	C	D	E	F MIN	G B.S.P.P Thread	H	J MAX.	J MIN.	K DRILL /TAP UN-2B	Mounting KITS		
													O-RING Buna.N	BOLT SHCS	LW HC
M-192-12-12	1/2	1.81	2.12	0.688	1.500	1.25	0.91	1/2	0.500	1.005	1.000	0.344	2210	31150	H-31
M-193-12-12												5/16-18			
M-192-16-16	3/4	1.69	2.56	0.875	1.875	1.06	0.50	3/4	0.750	1.255	1.250	0.406	2214	38150	H-38
M-193-16-16												3/8-16			
M-192-20-20	1	1.94	2.75	1.031	2.062	1.25	0.56	1	1.000	1.565	1.560	0.406	2219	38175	H-38
M-193-20-20												3/8-16			
M-192-24-24	1-1/4	2.19	3.12	1.188	2.312	1.44	0.62	1-1/4	1.250	1.755	1.750	0.469	2222	44175	H-44
M-193-24-24												7/16-14			
M-192-12-12	1-1/2	2.56	3.69	1.406	2.750	1.75	0.81	1-1/2	1.500	2.125	2.115	0.531	2225	50225	H-50
M-193-12-12												1/2-12			
M-192-12-12	2	3.06	4.00	1.688	3.062	2.00	1.06	2	2.000	2.500	2.490	0.531	2228	50250	H-50
M-193-12-12												1/2-13			
M-192-12-12	2-1/2	3.56	4.50	2.000	3.500	2.31	1.12	2-1/2	2.500	3.000	2.995	0.531	2232	50275	H-50
M-193-12-12												1/2-13			
M-192-12-12	3	5.16	5.31	2.438	4.188	2.25	1.59	3	3.000	3.625	3.615	0.656	2237	63275	H-63
M-193-12-12												35/8-11			



B.S.P.P. Thread												SAE Pattern 62		
Part. No.	Pipe Size	A	B	C	D	E	G B.S.P.P. Thread	H	J MAX.	J MIN.	K DRILL /TAP UN-2B	Mounting KITS		
												O-RING Buna.N	BOLT SHCS	LW HC
M-194-08-08	1/2	1.88	2.22	0.718	1.594	1.25	1/2	0.50	1.005	1.000	0.344	2210	38175	H-38
M-195-08-08											3/8-16			
M-194-12-12	3/4	2.38	2.81	0.937	2.000	1.25	3/4	0.75	1.255	1.250	0.406	2214	38200	H-38
M-195-12-12											3/8-16			
M-194-16-16	1	2.75	3.19	1.093	2.250	1.50	1	1.00	1.565	1.560	0.469	2219	44225	H-44
M-195-16-16											7/16-14			
M-194-20-20	1-1/4	3.06	3.75	1.250	2.625	1.50	1-1/4	1.25	1.755	1.750	0.531	2222	50225	H-50
M-195-20-20											1/2-13			
M-194-24-24	1-1/2	3.75	4.44	1.437	3.125	1.75	1-1/2	1.50	2.125	2.115	0.656	2225	50250	H-50
M-195-24-24											5/8-11			
M-194-32-32	2	4.50	5.25	1.750	3.812	1.75	2	2.00	2.500	2.490	0.781	2228	63275	H-63
M-195-32-32											3/4-10			



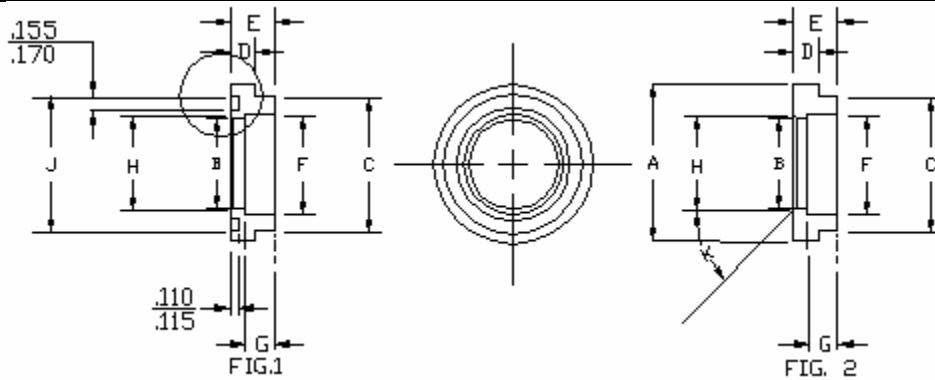
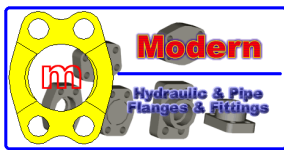
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M-FO/M-FXO

M-FN/M-FXN

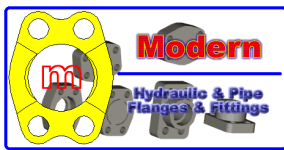
Flanged Head Fitting For Tube SAE Pattern Code 61											
Part. No.	Flange Size	A	B	C	D	E	F	G	J MAX.	J MIN.	WT
M-FO-06T-08F	3/8"	1.188	0.406	1.000	0.265	0.50	0.502	0.312	1.005	1.000	0.1
M-FN-06T-08F											
M-FO-08T-08F	1/2'	1.188	0.406	1.000	0.265	0.50	0.502	0.312	1.005	1.000	0.1
M-FN-08T-08F											
M-FO-10T-08F	1/2"	1.188	0.500	1.000	0.265	0.50	0.625	0.312	1.005	1.000	0.1
M-FN-10T-08F											
M-FO-12T-08F	1/2"	1.500	0.656	1.250	0.265	0.56	0.752	0.375	1.255	1.250	0.2
M-FN-12T-08F											
M-FO-12T-12F	3/4"	1.500	0.656	1.250	0.265	0.56	0.752	0.375	1.255	1.250	0.2
M-FN-12T-12F											
M-FO-14T-12F	3/4"	1.500	0.656	1.250	0.265	0.56	0.752	0.375	1.255	1.250	0.2
M-FN-14T-12F											
M-FO-16T-12F	3/4"	1.500	0.750	1.250	0.265	0.56	1.002	0.375	1.255	1.250	0.2
M-FN-16T-12F											
M-FO-08T-16F	3/4"	1.750	0.906	1.500	0.315	0.56	1.002	0.375	1.565	1.560	0.2
M-FN-08T-16F											
M-FO-10T-16F	1"	1.750	0.906	1.500	0.315	0.56	1.002	0.375	1.565	1.560	0.2
M-FN-10T-16F											
M-FO-12T-16F	1"	1.750	0.906	1.500	0.315	0.56	1.002	0.375	1.565	1.560	0.2
M-FN-12T-16F											
M-FO-14T-16F	1"	1.750	0.906	1.500	0.315	0.56	1.002	0.375	1.565	1.560	0.2
M-FN-14T-16F											
M-FO-16T-16F	1"	1.750	0.906	1.500	0.315	0.56	1.002	0.375	1.565	1.560	0.2
M-FN-16T-16F											
M-FO-18T-16F	1"	1.750	0.906	1.500	0.315	0.56	1.002	0.375	1.565	1.560	0.2
M-FN-18T-16F											
M-FO-20T-16F	1"	1.750	0.906	1.500	0.315	0.56	1.002	0.375	1.565	1.560	0.2
M-FN-20T-16F											
M-FO-20T-16F	1"	1.750	1.000	1.500	0.315	0.56	1.252	0.375	1.565	1.560	0.2
M-FN-20T-16F											
M-FO-12T-20F	1-1/4"	2.000	1.125	1.700	0.315	0.56	1.252	0.375	1.755	1.750	0.3
M-FN-12T-20F											
M-FO-16T-20F	1-1/4"	2.000	1.125	1.700	0.315	0.56	1.252	0.375	1.755	1.750	0.3
M-FN-16T-20F											
M-FO-18T-20F	1-1/4"	2.000	1.125	1.700	0.315	0.56	1.252	0.375	1.755	1.750	0.3
M-FN-18T-20F											
M-FO-20T-20F	1-1/4"	2.000	1.125	1.700	0.315	0.56	1.252	0.375	1.755	1.750	0.3
M-FN-20T-20F											
M-FO-22T-20F	1-1/4"	2.000	1.125	1.700	0.315	0.56	1.252	0.375	1.755	1.750	0.3
M-FN-22T-20F											
M-FO-24T-20F	1-1/4"	2.000	1.250	1.700	0.315	0.56	1.502	0.438	1.755	1.750	0.2
M-FN-24T-20F											
M-FO-16T-24F	1-1/2"	2.380	1.375	1.980	0.315	0.62	1.502	0.438	2.125	2.115	0.4
M-FN-16T-24F											
M-FO-20T-24F	1-1/2"	2.380	1.375	1.980	0.315	0.62	1.502	0.438	2.125	2.115	0.4
M-FN-20T-24F											
M-FO-24T-24F	1-1/2"	2.380	1.375	1.980	0.315	0.62	1.502	0.438	2.125	2.115	0.4
M-FN-24T-24F											



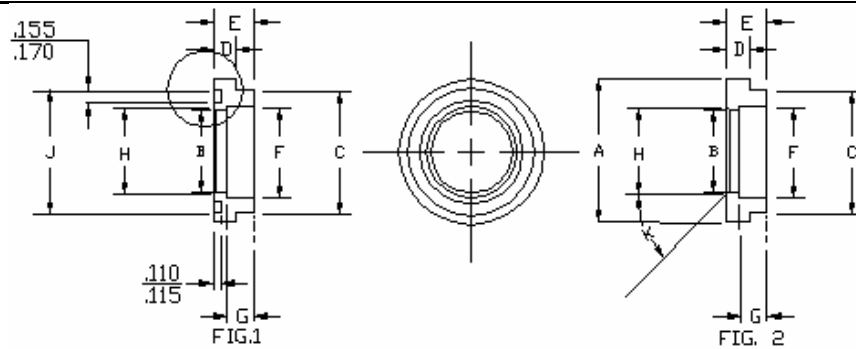
M-FOM/FXO

M-FNM/FXN

Flanged Head Fitting										SAE Pattern Code 61	
Part. No.	Flange Size	A	B	C	D	E	F	G	J MAX.	J MIN.	WT
M-FO-28T-24F	1-1/2"	2.380	1.500	1.980	0.315	0.62	1.752	0.500	2.125	2.115	0.3
M-FN-28T-24F											
M-FO-16T-32F	2"	2.810	1.875	2.450	0.375	0.62	2.002	0.500	2.500	2.490	0.5
M-FN-16T-32F											
M-FO-20T-32F	2"	2.810	1.875	2.450	0.375	0.62	2.002	0.500	2.500	2.490	0.5
M-FN-20T-32F											
M-FO-24T-32F	2"	2.810	1.875	2.450	0.375	0.62	2.002	0.500	2.500	2.490	0.5
M-FN-24T-32F											
M-FO-28T-32F	2"	2.810	1.875	2.450	0.375	0.62	2.002	0.500	2.500	2.490	0.5
M-FN-28T-32F											
M-FO-32T-32F	2"	2.810	1.875	2.450	0.375	0.62	2.002	0.500	2.500	2.490	0.5
M-FN-32T-32F											
M-FO-36T-32F	2"	2.810	2.000	2.450	0.375	0.62	2.252	0.500	2.500	2.490	0.3
M-FN-36T-32F											
M-FO-24T-40F	2-1/2"	2.312	2.375	2.921	0.375	0.68	2.502	0.500	3.005	2.995	0.1
M-FN-24T-40F											
M-FO-32T-40F	2-1/2"	2.312	2.375	2.921	0.375	0.68	2.502	0.500	3.005	2.995	0.1
M-FN-32T-40F											
M-FO-36T-40F	2-1/2"	2.312	2.375	2.921	0.375	0.68	2.502	0.500	3.005	2.995	0.1
M-FN-36T-40F											
M-FO-40T-40F	2-1/2"	2.312	2.375	2.921	0.375	0.68	2.502	0.500	3.005	2.995	0.1
M-FN-40T-40F											
M-FO-44T-40F	2-1/2"	3.312	2.500	2.921	0.375	0.68	2.752	0.500	3.005	2.995	0.4
M-FN-44T-40F											
M-FO-32T-48F	3"	4.000	2.875	3.546	0.375	0.75	3.002	0.562	3.625	3.615	0.9
M-FN-32T-48F											
M-FO-40T-48F	3"	4.000	2.875	3.546	0.375	0.75	3.002	0.562	3.625	3.615	0.9
M-FN-40T-48F											
M-FO-48T-48F	3"	4.000	2.875	3.546	0.375	0.75	3.002	0.562	3.625	3.615	0.9
M-FN-48T-48F											
M-FO-40T-56F	3-1/2"	4.000	2.875	3.546	0.375	0.75	3.002	0.562	3.625	3.615	0.9
M-FN-40T-56F											
M-FO-48T-56F	3-1/2"	4.000	2.875	3.546	0.375	0.75	3.002	0.562	3.625	3.615	0.9
M-FN-48T-56F											
M-FO-56T-56F	3-1/2"	4.000	2.875	3.546	0.375	0.75	3.002	0.562	3.625	3.615	0.9
M-FN-56T-56F											
M-FO-48T-64F	4"	4.000	2.875	3.546	0.375	0.75	3.002	0.562	3.625	3.615	0.9
M-FN-48T-64F											
M-FO-56T-64F	4"	5.000	2.875	4.484	0.442	1.000	3.002	0.625	3.560	4.595	3.0
M-FN-56T-64F											
M-FO-64T-80F	5"	6.000	4.875	5.484	0.442	1.125	5.002	0.937	5.06	5.615	4.0
M-FN-64T-80F											



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M-FO/M-FXO

M-FN/M-FXN

Flanged Head Fitting											
SAE Pattern Code 62											
Part. No.	Flange Size	A	B	C	D	E	F	G	J MAX.	J MIN.	WT
M-FXO-08T-08F	3/4	1.625	0.656	1.250	0.345	0.69	0.752	0.500	1.255	1.250	0.3
M-FXN-08T-08F											
M-FXO-08T-12F	3/4	1.625	0.656	1.250	0.345	0.69	0.752	0.500	1.255	1.250	0.3
M-FXN-08T-12F											
M-FXO-10T-12F	3/4	1.625	0.656	1.250	0.345	0.69	0.752	0.500	1.255	1.250	0.3
M-FXN-10T-12F											
M-FXO-12T-12F	3/4	1.625	0.656	1.250	0.345	0.69	0.752	0.500	1.255	1.250	0.3
M-FXN-12T-12F											
M-FXO-16T-12F	1	1.625	0.750	1.250	0.345	0.69	1.002	0.500	1.255	1.250	0.2
M-FXN-16T-12F											
M-FXO-12T-16F	1	1.875	0.810	1.500	0.375	0.81	1.002	0.625	1.565	1.560	0.4
M-FXN-12T-16F											
M-FXO-16T-16F	1	1.875	0.810	1.500	0.375	0.81	1.002	0.625	1.565	1.560	0.4
M-FXN-16T-16F											
M-FXO-18T-16F	1	1.875	0.810	1.500	0.375	0.81	1.002	0.625	1.565	1.560	0.4
M-FXN-18T-16F											
M-FXO-20T-16F	1-1/4	1.875	1.000	1.500	0.375	0.81	1.252	0.625	1.565	1.560	0.3
M-FXN-20T-16F											
M-FXO-16T-20F	1-1/4	2.125	1.010	1.718	0.405	1.00	1.252	0.812	1.755	2.750	0.5
M-FXN-16T-20F											
M-FXO-20T-20F	1-1/4	2.125	1.010	1.718	0.405	1.00	1.252	0.812	1.755	2.750	0.5
M-FXN-20T-20F											
M-FXO-22T-20F	1-1/4	2.125	1.010	1.718	0.405	1.00	1.252	0.812	1.755	2.750	0.5
M-FXN-22T-20F											
M-FXO-24T-20F	1-1/2	2.125	1.250	1.718	0.405	1.00	1.502	0.812	1.755	1.750	0.3
M-FXN-24T-20F											
M-FXO-20T-24F	1-1/2	2.500	1.250	2.000	0.495	1.19	1.502	1.000	2.125	2.115	0.7
M-FXN-20T-24F											
M-FXO-22T-24F	1-1/2	2.500	1.250	2.000	0.495	1.19	1.502	1.000	2.125	2.115	0.7
M-FXN-22T-24F											
M-FXO-24T-24F	1-1/2	2.500	1.250	2.000	0.495	1.19	1.502	1.000	2.125	2.115	0.7
M-FXN-24T-24F											
M-FXO-26T-24F	1-1/2	2.500	1.250	2.000	0.495	1.19	1.502	1.000	2.125	2.115	0.7
M-FXN-26T-24F											
M-FXO-28T-24F	1-3/4	2.500	1.500	2.000	0.495	1.19	1.752	1.000	2.125	2.115	0.5
M-FXN-28T-24F											
M-FXO-24T-32F	2	3.125	1.750	2.620	0.495	1.50	2.002	1.375	2.500	2.490	1.3
M-FXN-24T-32F											
M-FXO-28T-32F	2	3.125	1.750	2.620	0.495	1.50	2.002	1.375	2.500	2.490	1.3
M-FXN-28T-32F											
M-FXO-32T-32F	2	3.125	1.750	2.620	0.495	1.50	2.002	1.375	2.500	2.490	1.3
M-FXN-32T-32F											
M-FXO-36T-32F	2-1/4	3.125	2.000	2.620	0.495	1.50	2.252	1.312	2.500	2.490	1.0
M-FXN-36T-32F											
M-FXO-32T-40F	2	3.125	1.750	2.620	0.495	1.50	2.002	1.375	2.500	2.490	1.3
M-FXN-32T-40F											

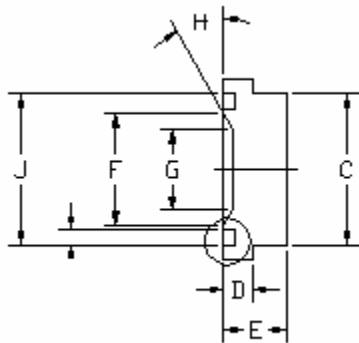


FIG. 1  
FPO-IP/FP OX-IP

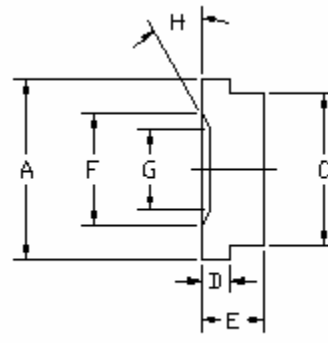
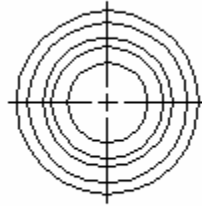


FIG. 2  
FPN-IP/FPNX-IP

Flange Plug										Code 61	
Part. No.	Flange Size	A	C	D	E	F	G	H	J MAX.	J MIN.	WT
M-FPO-IP-08	1/2"	1.188	0.924	0.265	0.50	0.560	0.394	30°	1.005	1.000	0.2
M-FPN-IP-08											
M-FPO-IP-12	3/4"	1.500	1.234	0.265	0.56	0.810	0.492	30°	1.255	1.250	0.3
M-FPN-IP-12											
M-FPO-IP-16	1"	1.750	1.484	0.315	0.56	1.060	0.649	30°	1.565	1.560	0.4
M-FPN-IP-16											
M-FPO-IP-20	1-1/4"	2.000	1.684	0.315	0.56	1.310	0.906	30°	1.755	1.750	0.5
M-FPN-IP-20											
M-FPO-IP-24	1-1/2"	2.375	1.964	0.315	0.62	1.560	0.866	30°	2.125	2.115	0.7
M-FPN-IP-24											
M-FPO-IP-32	2"	2.810	2.434	0.375	0.62	2.060	1.358	20°	2.500	2.490	1.0
M-FPN-IP-32											
M-FPO-IP-40	2-1/2"	2.312	2.904	0.375	0.68	2.560	1.358	20°	3.005	2.995	1.0
M-FPN-IP-40											
M-FPO-IP-48	3"	4.000	3.534	0.375	0.75	3.060	2.874	20°	3.625	3.615	2.5
M-FPN-IP-48											
M-FPO-IP-56	3-1/2"	4.500	3.984	0.442	0.88	3.560	3.366	20°	4.115	4.095	3.6
M-FPN-IP-56											
M-FPO-IP-64	4"	5.000	4.484	0.442	1.00	4.060	3.866	20°	4.615	4.595	5.0
M-FPN-IP-64											

Flange Plug										Code 62	
Part. No.	Flange Size	A	C	D	E	F	G	H	J MAX.	J MIN.	WT
M-FPXO-IP-08	1/2"	1.250	0.924	0.305	0.56	0.560	0.500	30°	1.005	1.000	0.2
M-FPXX-IP-08											
M-FPXO-IP-12	3/4"	1.625	1.234	0.345	0.69	0.810	0.649	30°	1.255	1.250	0.3
M-FPXX-IP-12											
M-FPXO-IP-16	1"	1.875	1.484	0.375	0.81	1.060	0.649	30°	1.565	1.560	0.5
M-FPXX-IP-16											
M-FPXO-IP-16	1-1/4"	2.125	1.704	0.405	1.00	1.310	0.787	30°	1.755	2.750	0.8
M-FPXX-IP-16											
M-FPXO-IP-24	1-1/2'	2.500	1.984	0.495	1.19	1.560	0.984	30°	2.125	2.115	1.3
M-FPXX-IP-24											
M-FPXO-IP-32	2"	3.125	2.604	0.495	1.50	2.060	1.300	20°	2.500	2.490	2.6
M-FPXX-IP-32											

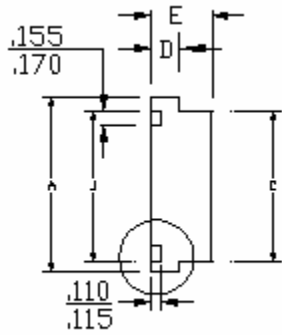
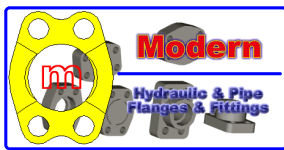


FIG.1  
FPO/FPOX

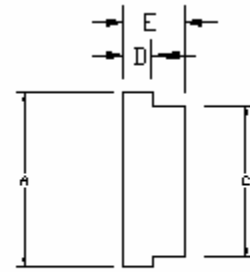
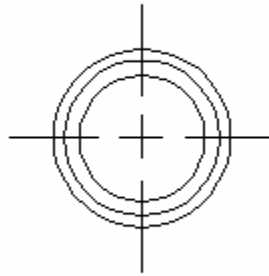
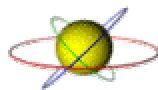
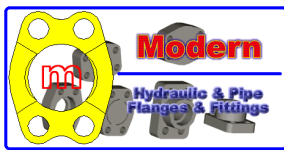


FIG.2  
FPN/FPNX

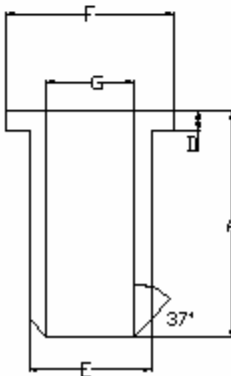
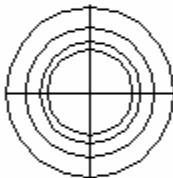
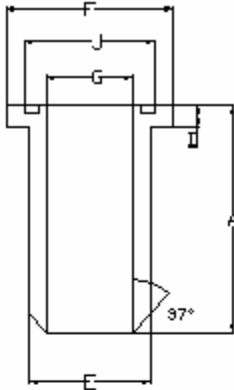
Flange Plug Code 61								
Part. No.	Flange Size	A	C	D	E	J MAX.	J MIN.	WT
M-FPO-08	1/2"	1.188	0.924	0.265	0.50	1.005	1.000	0.2
M-FPN-08								
M-FPO-12	3/4"	1.500	1.234	0.265	0.56	1.255	1.250	0.3
M-FPN-12								
M-FPO-16	1"	1.750	1.484	0.315	0.56	1.565	1.560	0.4
M-FPN-16								
M-FPO-20	1-1/4"	2.000	1.684	0.315	0.56	1.755	1.750	0.5
M-FPN-20								
M-FPO-24	1-1/2"	2.375	1.964	0.315	0.62	2.125	2.115	0.7
M-FPN-24								
M-FPO-32	2"	2.810	2.434	0.375	0.62	2.500	2.490	1.0
M-FPN-32								
M-FPO-40	2-1/2"	2.312	2.904	0.375	0.68	3.005	2.995	1.0
M-FPN-40								
M-FPO-48	3"	4.000	3.534	0.375	0.75	3.625	3.615	2.5
M-FPN-48								
M-FPO-56	3-1/2"	4.500	3.984	0.442	0.88	4.115	4.095	3.6
M-FPN-56								
M-FPO-64	4"	5.000	4.484	0.442	1.00	4.615	4.595	5.0
M-FPN-64								

Flange Plug Code 62								
Part. No.	Flange Size	A	C	D	E	J MAX.	J MIN.	WT
M-FPXO-08	1/2"	1.250	0.924	0.305	0.56	1.005	1.000	0.2
M-FPXX-08								
M-FPXO-12	3/4"	1.625	1.234	0.345	0.69	1.255	1.250	0.3
M-FPXX-12								
M-FPXO-16	1"	1.875	1.484	0.375	0.81	1.565	1.560	0.5
M-FPXX-16								
M-FPXO-20	1-1/4"	2.125	1.704	0.405	1.00	1.755	2.750	0.8
M-FPXX-20								
M-FPXO-24	1-1/2"	2.500	1.984	0.495	1.19	2.125	2.115	1.3
M-FPXX-24								
M-FPXO-32	2"	3.125	2.604	0.495	1.50	2.500	2.490	2.6
M-FPXX-32								





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### Butt Weld To Flanges Head For Sch.40 Pipe SAE Pattern 61

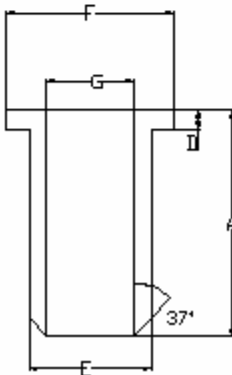
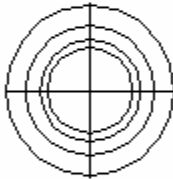
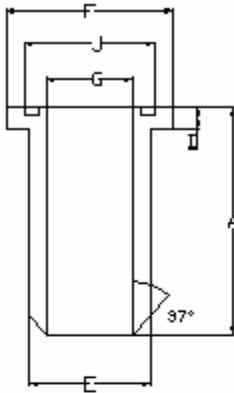
Part. No.	Pipe Size	A	D	E	F	G	J MAX.	J MIN.
M-40BWO-08P-08F	1/2	1.06	0.265	0.840	1.188	0.622	1.005	1.000
M-40BWN-08P-08F								
M-40BWO-12P-12F	3/4	1.06	0.265	1.050	1.500	0.824	1.255	1.250
M-40BWN-12P-12F								
M-40BWO-16P-16F	1	1.25	0.315	1.315	1.750	1.049	1.565	1.560
M-40BWN-16P-16F								
M-40BWO-20P-20F	1-1/4	1.44	0.315	1.660	2.000	1.380	1.755	1.750
M-40BWN-20P-20F								
M-40BWO-24P-24F	1-1/2	1.75	0.315	1.900	2.375	1.610	2.125	2.115
M-40BWN-24P-24F								
M-40BWO-32P-32F	2	2.00	0.375	2.375	2.812	2.067	2.500	2.490
M-40BWN-32P-32F								
M-40BWO-40P-40F	2-1/2	2.50	0.375	2.875	3.312	2.469	3.005	2.995
M-40BWN-40P-40F								
M-40BWO-48P-48F	3	2.32	0.375	3.500	4.000	3.068	3.625	3.615
M-40BWN-48P-48F								

### Butt Weld To Flanges Head For Sch.80 Pipe SAE Pattern 61

Part. No.	Pipe Size	A	D	E	F	G	J MAX.	J MIN.
M-80BWO-08P-08F	1/2	1.06	0.265	0.840	1.188	0.546	1.005	1.000
M-80BWN-08P-08F								
M-80BWO-12P-12F	3/4	1.06	0.265	1.050	1.500	0.742	1.255	1.250
M-80BWN-12P-12F								
M-80BWO-16P-16F	1	1.25	0.315	1.315	1.750	0.957	1.565	1.560
M-80BWN-16P-16F								
M-80BWO-20P-20F	1-1/4	1.44	0.315	1.660	2.000	1.278	1.755	1.750
M-80BWN-20P-20F								
M-80BWO-24P-24F	1-1/2	1.75	0.315	1.900	2.375	1.500	2.125	2.115
M-80BWN-24P-24F								
M-80BWO-32P-32F	2	2.00	0.375	2.375	2.812	1.939	2.500	2.490
M-80BWN-32P-32F								
M-80BWO-40P-40F	2-1/2	2.50	0.375	2.875	3.312	2.323	3.005	2.995
M-80BWN-40P-40F								
M-80BWO-48P-48F	3	2.32	0.375	3.500	4.000	2.900	3.625	3.615
M-80BWN-48P-48F								

### Butt Weld TFO Flanges Head For Sch.160 Pipe SAE Pattern 61

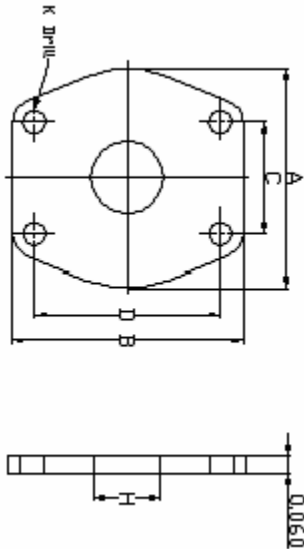
Part. No.	Pipe Size	A	D	E	F	G	J MAX.	J MIN.
M-160BWO-08P-08F	1/2	1.06	0.265	0.840	1.188	0.464	1.005	1.000
M-160BWN-08P-08F								
M-160BWO-12P-12F	3/4	1.06	0.265	1.050	1.500	0.614	1.255	1.250
M-160BWN-12P-12F								
M-160BWO-16P-16F	1	1.25	0.315	1.315	1.750	0.815	1.565	1.560
M-160BWN-16P-16F								
M-160BWO-20P-20F	1-1/4	1.44	0.315	1.660	2.000	1.160	1.755	1.750
M-160BWN-20P-20F								
M-160BWO-24P-24F	1-1/2	1.75	0.315	1.900	2.375	1.337	2.125	2.115
M-160BWN-24P-24F								
M-160BWO-32P-32F	2	2.00	0.375	2.375	2.812	1.689	2.500	2.490
M-160BWN-32P-32F								
M-160BWO-40P-40F	2-1/2	2.50	0.375	2.875	3.312	2.125	3.005	2.995
M-160BWN-40P-40F								
M-160BWO-48P-48F	2-1/2	2.32	0.375	3.500	4.000	2.624	3.625	3.615
M-160BWN-48P-48F								



Butt Weld To Flanges Head For Sch.80 Pipe						SAE Pattern 62		
Part. No.	Pipe Size	A	D	E	F	G	J MAX.	J MIN.
M-80BWXC-12P-12F	3/4	1.42	0.345	1.050	1.625	0.742	1.255	1.250
M-80BWXN-12P-12F								
M-80BWXC-16P-16F	1	1.61	0.375	1.315	1.875	0.957	1.565	1.560
M-80BWXN-16P-16F								
M-80BWXC-20P-20F	1-1/4	1.73	0.405	1.660	2.125	1.278	1.755	1.750
M-80BWXN-20P-20F								
M-80BWXC-24P-24F	1-1/2	2.17	0.495	1.900	2.500	1.500	2.125	2.115
M-80BWXN-24P-24F								
M-80BWXC-32P-32F	2	2.48	0.495	2.375	3.125	1.939	2.500	2.490
M-80BWXN-32P-32F								

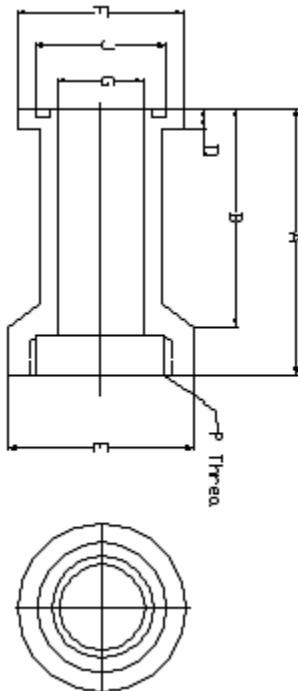
Butt Weld To Flanges Head For Sch.160 Pipe						SAE Pattern 62		
Part. No.	Pipe Size	A	D	E	F	G	J MAX.	J MIN.
M-160BWXC-12P-12F	3/4	1.42	0.345	1.050	1.625	0.614	1.255	1.250
M-160BWXN-12P-12F								
M-160BWXC-16P-16F	1	1.61	0.375	1.315	1.875	0.815	1.565	1.560
M-160BWXN-16P-16F								
M-160BWXC-20P-20F	1-1/4	1.73	0.405	1.660	2.125	1.160	1.755	1.750
M-160BWXN-20P-20F								
M-160BWXC-24P-24F	1-1/2	2.17	0.495	1.900	2.500	1.337	2.125	2.115
M-160BWXN-24P-24F								
M-160BWXC-32P-32F	2	2.48	0.495	2.375	3.125	1.689	2.500	2.490
M-160BWXN-32P-32F								

Butt Weld To Flanges Head For Sch.XXS Pipe						SAE Pattern 62		
Part. No.	Pipe Size	A	D	E	F	G	J MAX.	J MIN.
M-XXSBWXC-12P-12F	3/4	1.42	0.345	1.050	1.625	0.434	1.255	1.250
M-XXSBWXN-12P-12F								
M-XXSBWXC-16P-16F	1	1.61	0.375	1.315	1.875	0.599	1.565	1.560
M-XXSBWXN-16P-16F								
M-XXSBWXC-20P-20F	1-1/4	1.73	0.405	1.660	2.125	0.896	1.755	1.750
M-XXSBWXN-20P-20F								
M-XXSBWXC-24P-24F	1-1/2	2.17	0.495	1.900	2.500	1.100	2.125	2.115
M-XXSBWXN-24P-24F								
M-XXSBWXC-32P-32F	2	2.48	0.495	2.375	3.125	1.503	2.500	2.490
M-XXSBWXN-32P-32F								



Connector Plate SAE Pattern Code 61							
Part No.	Size	A	B	C	D	H	K Drill
M-CP-08	1/2	1.81	2.12	0.688	1.500	0.50	0.344
M-CP-12	3/4	2.06	2.56	0.875	1.875	0.75	0.406
M-CP-16	1	2.31	2.75	1.031	2.062	1.00	0.406
M-CP-20	1-1/4	2.88	3.12	1.188	2.312	1.25	0.469
M-CP-24	1-1/2	3.25	3.69	1.406	2.750	1.50	0.531
M-CP-32	2	3.81	4.00	1.688	3.062	2.00	0.531
M-CP-40	2-1/2	4.12	4.44	2.000	3.500	2.50	0.531
M-CP-48	3	5.16	5.31	2.438	4.188	3.00	0.656

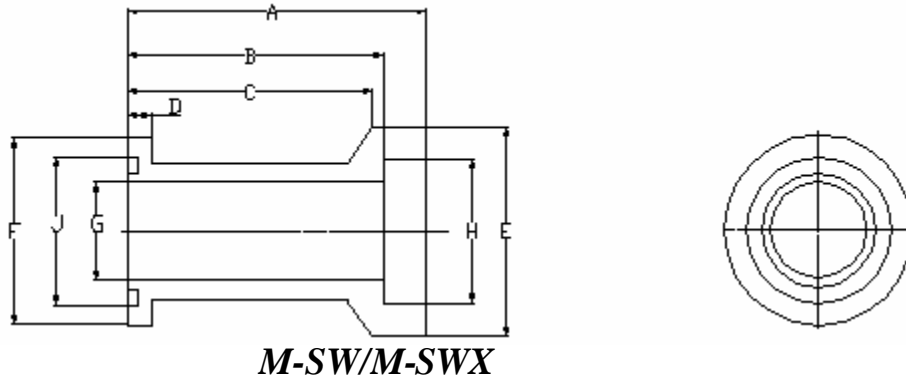
Connector Plate SAE Pattern Code 62							
Part. No.	Size	A	B	C	D	H	K Drill
M-CPX-12	3/4	2.38	2.81	0.937	2.000	0.75	0.406
M-CPX-16	1	2.75	3.19	1.093	2.250	1.00	0.469
M-CPX-20	1-1/4	3.06	3.75	1.250	2.625	1.25	0.531
M-CPX-24	1-1/2	3.75	4.44	1.437	3.125	1.50	0.656
M-CPX-32	2	4.50	5.25	1.750	3.812	2.00	0.781



NPTF Thread To Flanged Head SAE Pattern Code 61								
Part. No.	Pipe Size	A	B	P UN	D	E	F	G
M-TN-12P-12F	3/4	2.47	1.62	3/4	0.265	1.50	1.500	0.75
M-TN-16P-16F	1	2.66	1.62	1	0.315	1.75	1.750	1.00
M-TN-20P-20F	1-1/4	2.84	1.81	1-1/4	0.315	2.00	2.000	1.25
M-TN-24P-24F	1-1/2	3.00	2.00	1-1/2	0.315	2.38	2.375	1.50
M-TN-32P-32F	2	3.00	2.00	2	0.375	2.81	2.812	2.00

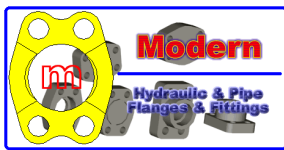
S.A.E. Thread To Flanged Head SAE Pattern Code 62								
Part. No.	Pipe Size	A	B	P UN	D	E	F	G
M-TS-12P-12F	3/4	2.47	1.62	1-1/16-12	0.265	1.50	1.500	0.75
M-TS-16P-16F	1	2.66	1.62	1-5/16-12	0.315	1.75	1.750	1.00
M-TS-20P-20F	1-1/4	2.84	1.81	1-5/8-12	0.315	2.00	2.000	1.25
M-TS-24P-24F	1-1/2	3.00	2.00	1-7/8-12	0.315	2.38	2.375	1.50
M-TS-32P-32F	2	3.00	2.00	2-1/2-12	0.375	2.81	2.812	2.00



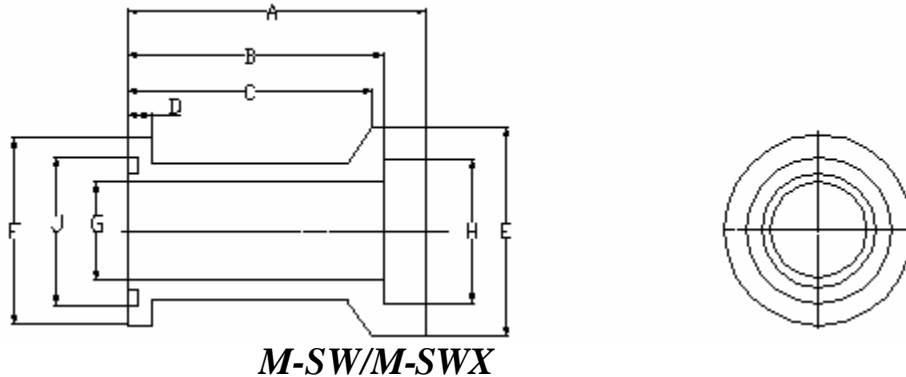


Socket Weld To Flanged Head For Tube											Code 61	
Part. No.	Tube Size	A	B	C	D	E	F	G	H	J MAX.	J MIN.	
M-SW-12T-12F	3/4	2.34	1.78	1.62	0.265	1.50	1.500	0.625	0.752	1.255	1.250	
M-SW-16T-12F	1	2.34	1.78	1.62	0.265	1.50	1.500	0.750	1.002	1.255	1.250	
M-SW-16T-16F	1	2.38	1.75	1.62	0.315	1.75	1.750	0.875	1.002	1.565	1.560	
M-SW-20T-16F	1-1/4	2.38	1.75	1.62	0.315	1.75	1.750	1.000	1.252	1.565	1.560	
M-SW-20T-20F	1-1/4	2.62	2.00	1.81	0.315	2.00	2.000	1.125	1.252	1.755	1.750	
M-SW-24T-20F	1-1/2	2.62	1.94	1.81	0.315	2.00	2.000	1.250	1.502	1.755	1.750	
M-SW-24T-24F	1-1/2	2.88	2.19	2.00	0.315	2.38	2.375	1.375	1.502	2.125	2.115	
M-SW-28T-24F	1-3/4	2.88	2.12	2.00	0.315	2.38	2.375	1.500	1.752	2.125	2.115	
M-SW-32T-32F	2	3.00	2.12	2.00	0.375	2.81	2.812	1.875	2.002	2.500	2.490	
M-SW-36T-32F	2-1/4	3.00	2.12	2.00	0.375	2.81	2.812	2.000	2.252	2.500	2.490	

Socket Weld To Flanged Head For Tube											Code 62	
Part. No.	Tube Size	A	B	C	D	E	F	G	H	J MAX.	J MIN.	
M-SWX-16T-16F	1	3.06	2.43	2.34	0.375	2.000	1.875	0.875	1.002	1.565	1.560	
M-SWX-20T-16F	1-1/4	3.06	2.43	2.34	0.375	2.000	1.875	1.000	1.252	1.565	1.560	
M-SWX-20T-20F	1-1/4	3.31	2.62	2.50	0.405	2.312	2.125	1.125	1.252	1.755	1.750	
M-SWX-24T-20F	1-1/2	3.31	2.62	2.50	0.405	2.312	2.125	1.250	1.502	1.755	1.750	
M-SWX-24T-24F	1-1/2	3.93	3.18	3.06	0.495	2.750	2.500	1.375	1.502	2.125	2.115	
M-SWX-28T-24F	1-3/4	3.93	3.18	3.06	0.495	2.750	2.500	1.500	1.752	2.125	2.115	
M-SWX-32T-32F	2	4.06	3.18	3.18	0.495	3.250	3.125	1.875	2.002	2.500	2.490	
M-SWX-36T-32F	2-1/4	4.06	3.18	3.18	0.495	3.250	3.125	2.000	2.252	2.500	2.490	



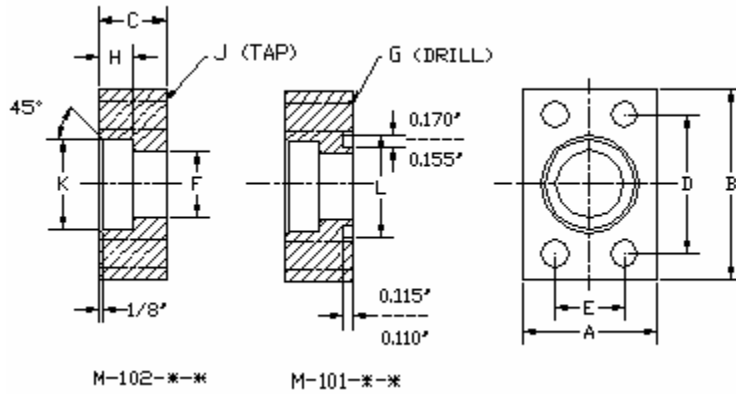
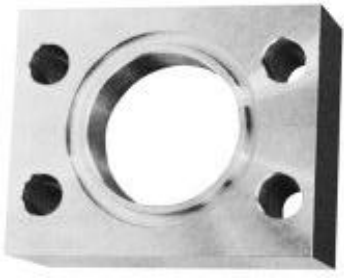
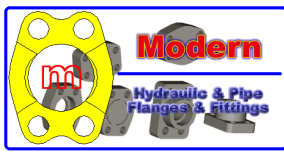
Modern is always touching the Future!



Socket Weld To Flanged Head For Pipe Code 61											
Part. No.	Pipe Size	A	B	C	D	E	F	G	H	J MAX.	J MIN.
M-SW-12P-12F	3/4	2.34	1.78	1.62	0.265	1.50	1.500	0.625	0.752	1.255	1.250
M-SW-16P-16F	1	2.38	1.75	1.62	0.315	1.75	1.750	0.875	1.002	1.565	1.560
M-SW-20P-20F	1-1/4	2.62	2.00	1.81	0.315	2.00	2.000	1.125	1.252	1.755	1.750
M-SW-24P-24F	1-1/2	2.88	2.19	2.00	0.315	2.38	2.375	1.375	1.502	2.125	2.115
M-SW-32P-32F	2	3.00	2.12	2.00	0.375	2.81	2.812	1.875	2.002	2.500	2.490

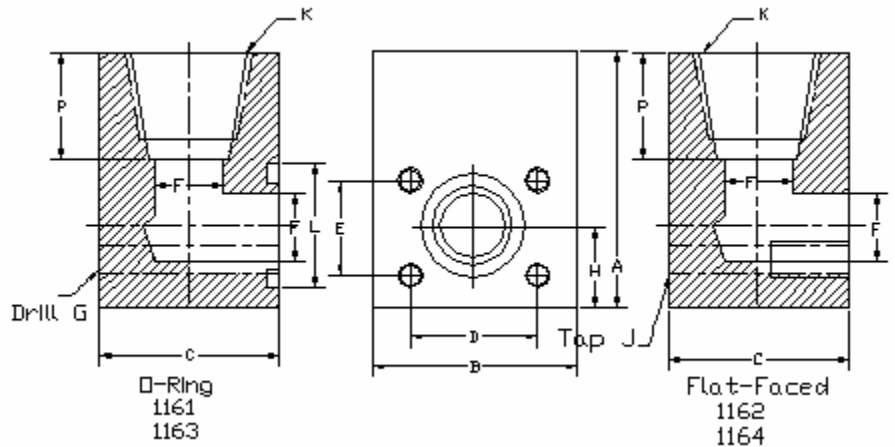
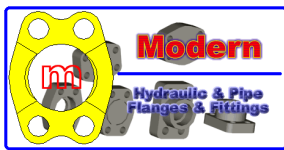
Socket Weld To Flanged Head For Pipe Code 62											
Part. No.	Pipe Size	A	B	C	D	E	F	G	H	J MAX.	J MIN.
M-SWX-16P-16F	1	3.06	2.43	2.34	0.375	2.000	1.875	1.000	1.328	1.565	1.560
M-SWX-20P-20F	1-1/4	3.31	2.62	2.50	0.405	2.312	2.125	1.125	1.672	1.755	1.750
M-SWX-24P-24F	1-1/2	3.93	3.18	3.06	0.495	2.750	2.500	1.375	1.922	2.125	2.115
M-SWX-32P-32F	2	4.06	3.18	3.18	0.495	3.250	3.125	1.875	2.406	2.500	2.490





Socket Weld In-Line Pipe Flanges													SAE Bolt Pattern			Code 61 Series	
Part. No.	PIPE SIZE	A	B	C	D	E	F	K	H	L MAX.	L MIN.	G/J DRILL /TAP UN-2B	Mounting KITS			WT	
													O-RING Buna.N	BOLT SHCS	LW HC		
M-1101-08-08	1/2	1.50	2.12	0.75	1.500	0.688	0.50	0.860	0.38	1.005	1.000	0.344	2210	31125	H-031	0.6	
M-1102-08-08												5/16-18					
M-1101-12-12	3/4	1.75	2.62	1.00	1.875	0.875	0.75	1.070	0.50	1.255	1.250	0.406	2214	38175	H-038	1.0	
M-1102-12-12												3/8-16					
M-1101-16-16	1	2.00	2.82	1.00	2.062	1.031	1.00	1.335	0.50	1.565	1.560	0.406	2219	38175	H-038	1.2	
M-1102-16-16												3/8-16					
M-1101-20-20	1-1/4	2.50	3.19	1.00	2.312	1.188	1.25	1.680	0.50	1.755	1.750	0.469	2222	44175	H-044	1.7	
M-1102-20-20												7/16-14					
M-1101-24-24	1-1/2	2.75	3.75	1.25	2.750	1.406	1.50	1.920	0.50	2.125	2.115	0.531	2225	50200	H-050	2.3	
M-1102-24-24												1/2-13					
M-1101-32-32	2	3.25	4.00	1.50	3.062	1.688	1.94	2.411	0.62	2.500	2.490	0.531	2228	50225	H-050	3.5	
M-1102-32-32												1/2-13					
M-1101-40-40	2-1/2	4.00	4.50	1.75	3.500	2.000	2.44	2.911	0.75	3.000	2.995	0.531	2232	50250	H-050	5.7	
M-1102-40-40												1/2-13					
M-1101-48-48	3	4.50	5.31	2.00	4.188	2.438	2.94	3.540	0.75	3.625	3.615	0.656	2237	63300	H-063	9.2	
M-1102-48-48												5/8-11					
M-1101-56-56	3-1/2	5.00	6.00	1.50	4.750	2.750	3.44	4.045	0.75	4.115	4.095	0.656	2241	63250	H-063	7.2	
M-1102-56-56												5/8-11					
M-1101-64-64	4	5.50	6.38	1.50	5.125	3.062	3.94	4.550	0.75	4.615	4.595	0.656	2245	63250	H-063	8.5	
M-1102-64-64												5/8-11					
M-1101-80-80	5	7.00	7.25	2.00	6.000	3.625	4.94	5.625	0.75	5.615	5.595	0.656	2253	63300	H-063	14.5	
M-1102-80-80												5/8-11					

Socket Weld In-Line Pipe Flanges													SAE Bolt Pattern			Code 62 Series	
Part. No.	PIPE SIZE	A	B	C	D	E	F	K	H	L MAX.	L MIN.	G/J DRILL /TAP UN-2B	Mounting KITS			WT	
													O-RING Buna.N	BOLT SHCS	LW HC		
M-1103-08-08	1/2	1.75	2.22	1.00	1.594	0.718	0.50	0.860	0.50	1.005	1.000	0.344	2210	31150	H-031	0.8	
M-1104-08-08												5/16-18					
M-1103-12-12	3/4	2.00	2.81	1.00	2.000	0.937	0.75	1.070	0.50	1.255	1.250	0.406	2214	38175	H-038	1.2	
M-1104-12-12												3/8-16					
M-1103-16-16	1	2.25	3.19	1.00	2.250	1.093	1.00	1.093	0.50	1.565	1.560	0.469	2219	44175	H-044	1.5	
M-1104-16-16												7/16-14					
M-1103-20-20	1-1/4	2.75	3.75	1.25	2.625	1.250	1.25	1.250	0.50	1.755	1.750	0.531	2222	50225	H-050	2.7	
M-1104-20-20												1/2-13					
M-1103-24-24	1-1/2	3.25	4.50	1.50	3.125	1.437	1.50	1.437	0.50	2.125	2.115	0.656	2225	63250	H-063	4.7	
M-1104-24-24												5/8-11					
M-1103-32-32	2	4.00	5.25	1.75	3.812	1.750	1.94	1.750	0.62	2.500	2.490	0.781	2228	75300	H-075	7.5	
M-1104-32-32												3/4-10					
M-1103-40-40	2-1/2	5.00	6.88	2.00	4.875	2.312	2.38	2.312	0.62	3.000	2.995	0.940	2232	88350	H-088	14.7	
M-1104-40-40												7/8-9					
M-1103-48-48	3	6.00	8.50	2.50	6.000	2.812	2.94	2.812	0.62	3.625	3.615	1.19	2237	125450	H-125	28.0	
M-1104-48-48												1-1/8-7					

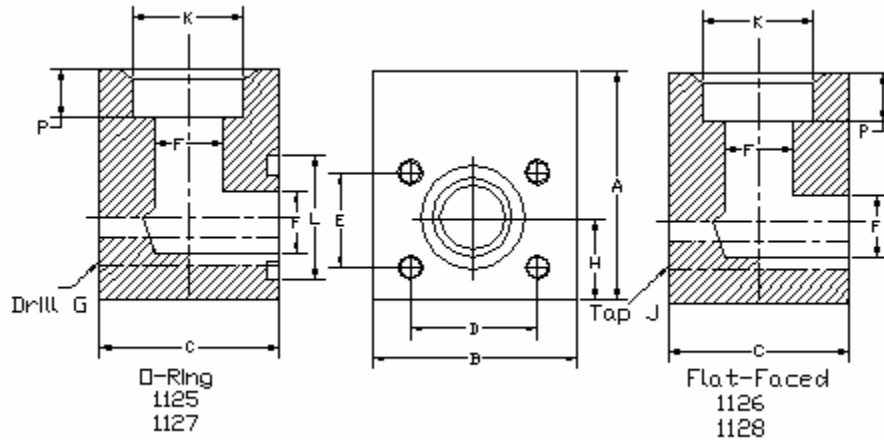
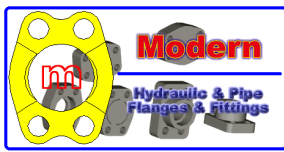


**NPTF Threaded Elbow Flanges** **Code 61 SERIES SAE Pattern**

Part. No.	PIPE SIZE	A	B	C	D	E	F	K	H	L MAX.	P	G/J DRILL /TAP UN-2B	Mounting KITS			WT
													O-RING Buna.N	BOLT SHCS	LW HC	
M-1161-08-08	1/2	2.00	2.12	1.44	1.500	0.688	0.50	1/2	0.75	1.005	1.19	0.344	2210	31200	H-031	1.5
M-1162-08-08												5/16-18				
M-1161-12-12	3/4	2.50	2.62	1.70	1.875	0.875	0.75	3/4	0.88	1.255	1.06	0.406	2214	38250	H-038	2.6
M-1162-12-12												3/8-16				
M-1161-16-16	1	3.00	2.82	1.94	2.062	1.031	1.00	1	1.00	1.565	1.25	0.406	2219	38275	H-038	3.5
M-1162-16-16												3/8-16				
M-1161-20-20	1-1/4	3.50	3.19	2.40	2.312	1.188	1.25	1-1/4	1.25	1.755	1.31	0.469	2222	44325	H-044	6.2
M-1162-20-20												7/16-14				
M-1161-24-24	1-1/2	4.00	3.75	2.90	2.750	1.406	1.50	1-1/2	1.38	2.125	1.31	0.531	2225	50400	H-050	9.9
M-1162-24-24												1/2-13				
M-1161-32-32	2	4.50	4.00	2.96	3.062	1.688	1.94	2	1.62	2.500	1.31	0.531	2228	50400	H-050	10.7
M-1162-32-32												1/2-13				
M-1161-40-40	2-1/2	5.00	4.50	3.96	3.500	2.000	2.44	2-1/2	2.00	3.000	1.75	0.531	2232	50500	H-050	17.7
M-1162-40-40												1/2-13				
M-1161-48-48	3	6.00	5.31	4.46	4.188	2.438	2.94	3	2.25	3.625	2.00	0.656	2237	63550	H-063	27.6
M-1162-48-48												5/8-11				

**NPTF Threaded Elbow Flanges** **Code 62 SERIES SAE Pattern**

Part. No.	PIPE SIZE	A	B	C	D	E	F	K	H	L MAX.	P	G/J DRILL /TAP UN-2B	Mounting KITS			WT
													O-RING Buna.N	BOLT SHCS	LW HC	
M-1163-08-08	1/2	2.00	2.22	1.46	1.594	0.718	0.50	1/2	0.88	1.005	1.06	0.344	2210	31200	H-031	1.6
M-1164-08-08												5/16-18				
M-1163-12-12	3/4	2.50	2.81	1.70	2.000	0.937	0.75	3/4	1.00	1.255	1.06	0.406	2214	38200	H-038	2.8
M-1164-12-12												3/8-16				
M-1163-16-16	1	3.00	3.19	1.96	2.250	1.093	1.00	1	1.12	1.565	1.25	0.469	2219	44275	H-044	4.4
M-1164-16-16												7/16-14				
M-1163-20-20	1-1/4	4.00	3.75	2.44	2.625	1.250	1.25	1-1/4	1.38	1.755	1.31	0.531	2222	50325	H-050	6.7
M-1164-20-20												1/2-13				
M-1163-24-24	1-1/2	4.00	4.50	2.96	3.125	1.437	1.50	1-1/2	1.62	2.125	1.31	0.656	2225	63400	H-063	12.1
M-1164-24-24												5/8-11				
M-1163-32-32	2	5.00	5.25	3.46	3.812	1.750	1.94	2	2.00	2.500	1.31	0.781	2228	75450	H-075	20.2
M-1164-32-32												3/4-10				
M-1163-40-40	2-1/2	6.00	6.88	4.00	4.875	2.312	2.38	2-1/2	2.50	3.000	1.75	0.940	2232	88550	H-088	37.9
M-1164-40-40												7/8-9				
M-1163-48-48	3	7.00	8.50	5.00	6.000	2.812	2.94	3	3.00	3.625	2.00	1.19	2237	125700	H-125	69.0
M-1164-48-48												1-1/8-7				



### Socket Weld Elbow Pipe Flanges

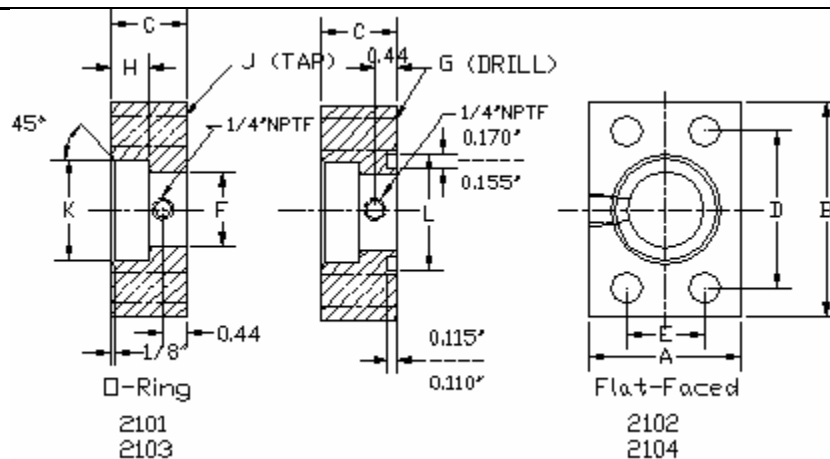
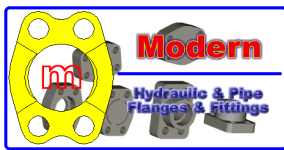
Code 61 SAE Pattern

Part. No.	PIPE SIZE	A	B	C	D	E	F	K	H	L MAX.	L MIN.	G/J DRILL /TAP UN-2B	Mounting KITS			WT
													O-RING Buna.N	BOLT SHCS	LW HC	
M-1125-08-08	1/2	1.75	2.12	1.44	1.500	0.688	0.50	0.860	0.75	1.005	1.000	0.344	2210	31200	H-031	1.3
M-1126-08-08												5/16-18				
M-1125-12-12	3/4	2.00	2.62	1.70	1.875	0.875	0.75	1.070	0.88	1.255	1.250	0.406	2214	38250	H-038	2.0
M-1126-12-12												3/8-16				
M-1125-16-16	1	2.25	2.82	1.94	2.062	1.031	1.00	1.335	1.00	1.565	1.560	0.406	2219	38275	H-038	2.7
M-1126-16-16												3/8-16				
M-1125-20-20	1-1/4	2.75	3.19	2.40	2.312	1.188	1.25	1.680	1.25	1.755	1.750	0.469	2222	44325	H-044	4.0
M-1126-20-20												7/16-14				
M-1125-24-24	1-1/2	3.00	3.75	2.90	2.750	1.406	1.50	1.920	1.38	2.125	2.115	0.531	2225	50400	H-050	7.0
M-1126-24-24												1/2-13				
M-1125-32-32	2	3.50	4.00	3.40	3.062	1.688	1.94	2.411	1.62	2.500	2.490	0.531	2228	50450	H-050	9.5
M-1126-32-32												1/2-13				
M-1125-40-40	2-1/2	4.00	4.50	3.96	3.500	2.000	2.44	2.911	2.00	3.000	2.995	0.531	2232	50500	H-050	15.0
M-1126-40-40												1/2-13				
M-1125-48-48	3	5.00	5.31	4.96	4.188	2.438	2.94	3.540	2.25	3.625	3.615	0.656	2237	63600	H-063	27.2
M-1126-48-48												5/8-11				
M-1125-56-56	3-1/2	5.50	6.00	5.40	4.750	2.750	3.44	4.045	2.50	4.115	4.095	0.656	2241	63650	H-063	37.0
M-1126-56-56												5/8-11				
M-1125-64-64	4	6.00	6.38	5.96	5.125	3.062	3.94	4.550	2.75	4.615	4.595	0.656	2245	63700	H-063	48.0
M-1126-64-64												5/8-11				
M-1125-80-80	5	7.00	7.25	6.90	6.000	3.625	4.94	5.635	3.38	5.615	5.595	0.656	2253	63800	H-063	61.0
M-1126-80-80												5/8-11				

### Socket Weld Elbow Pipe Flanges

Code 62 SAE Pattern

Part. No.	PIPE SIZE	A	B	C	D	E	F	K	H	L MAX.	L MIN.	G/J DRILL /TAP UN-2B	Mounting KITS			WT
													O-RING Buna.N	BOLT SHCS	LW HC	
M-1127-08-08	1/2	2.00	2.22	1.50	1.594	0.718	0.50	0.860	0.50	1.005	1.000	0.344	2210	31200	H-031	1.6
M-1128-08-08												5/16-18				
M-1127-12-12	3/4	2.25	2.81	1.75	2.000	0.937	0.75	1.070	0.50	1.255	1.250	0.406	2214	38250	H-038	2.6
M-1128-12-12												3/8-16				
M-1127-16-16	1	2.50	3.19	2.00	2.250	1.093	1.00	1.335	0.50	1.565	1.560	0.469	2219	44300	H-044	4.1
M-1128-16-16												7/16-14				
M-1127-20-20	1-1/4	3.00	3.75	2.25	2.625	1.250	1.25	1.680	0.50	1.755	1.750	0.531	2222	50325	H-050	6.3
M-1128-20-20												1/2-13				
M-1127-24-24	1-1/2	3.50	4.50	3.00	3.125	1.437	1.50	1.920	0.50	2.125	2.115	0.656	2225	63400	H-063	10.7
M-1128-24-24												5/8-11				
M-1127-32-32	2	4.00	5.25	3.50	3.812	1.750	1.94	2.411	0.62	2.500	2.490	0.781	2228	75450	H-075	15.9
M-1128-32-32												3/4-10				
M-1127-40-40	2-1/2	5.50	6.88	4.00	4.875	2.312	2.38	2.911	0.62	3.000	2.995	0.940	2232	88600	H-088	38.6
M-1128-40-40												7/8-9				
M-1127-48-48	3	6.00	8.50	5.00	6.000	2.812	2.94	3.540	0.62	3.625	3.615	1.19	2237	125700	H-125	56.5

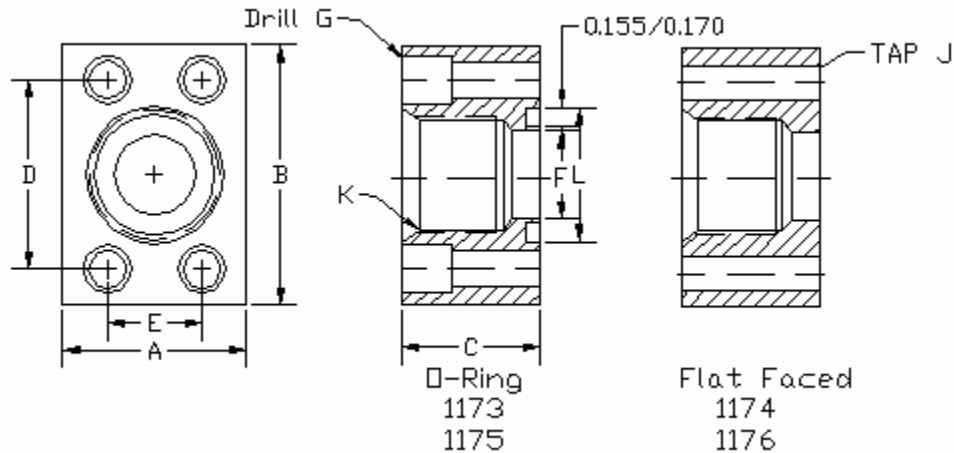
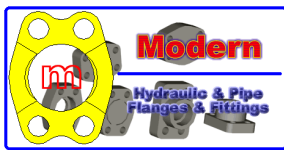


**Socket Weld In-Line Pipe Flanges Code 61 SAE Pattern**

Part. No.	PIPE SIZE	A	B	C	D	E	F	K	H	L MAX.	L MIN.	G/J DRILL /TAP UN-2B	Mounting KITS			WT
													O-RING Buna.N	BOLT SHCS	LW HC	
M-2101-08-08	1/2	1.50	2.12	1.25	1.500	0.688	0.50	0.860	0.38	1.005	1.000	0.344	2210	31175	H-031	0.7
M-2102-08-08												5/16-18				
M-2101-12-12	3/4	1.75	2.62	1.25	1.875	0.875	0.75	1.070	0.50	1.255	1.250	0.406	2214	38200	H-038	1.2
M-2102-12-12												3/8-16				
M-2101-16-16	1	2.00	2.82	1.25	2.062	1.031	1.00	1.335	0.50	1.565	1.560	0.406	2219	38200	H-038	1.5
M-2102-16-16												3/8-16				
M-2101-20-20	1-1/4	2.50	3.19	1.25	2.312	1.188	1.25	1.680	0.50	1.755	1.750	0.469	2222	44200	H-044	2.0
M-2102-20-20												7/16-14				
M-2101-24-24	1-1/2	2.75	3.75	1.25	2.750	1.406	1.50	1.920	0.50	2.125	2.115	0.531	2225	50200	H-050	2.5
M-2102-24-24												1/2-13				
M-2101-32-32	2	3.25	4.00	1.50	3.062	1.688	1.94	2.411	0.62	2.500	2.490	0.531	2228	50225	H-050	3.6
M-2102-32-32												1/2-13				
M-2101-40-40	2-1/2	4.00	4.50	1.75	3.500	2.000	2.44	2.911	0.75	3.000	2.995	0.531	2232	50250	H-050	5.7
M-2102-40-40												1/2-13				
M-2101-48-48	3	4.50	5.31	2.00	4.188	2.438	2.94	3.540	0.75	3.625	3.615	0.656	2237	63300	H-063	9.2
M-2102-48-48												5/8-11				
M-2101-56-56	3-1/2	5.00	6.00	1.50	4.750	2.750	3.44	4.045	0.75	4.115	4.095	0.656	2241	63250	H-063	7.7
M-2102-56-56												5/8-11				
M-2101-64-64	4	5.50	6.38	1.50	5.125	3.062	3.94	4.550	0.75	4.615	4.595	0.656	2245	63250	H-063	8.5
M-2102-64-64												5/8-11				
M-2101-80-80	5	7.00	7.25	2.00	6.000	3.625	4.94	5.635	0.75	5.615	5.595	0.656	2253	63300	H-063	14.5
M-2102-80-80												5/8-11				

**Socket Weld In-Line Pipe Flanges Code 61 SAE Pattern**

Part. No.	PIPE SIZE	A	B	C	D	E	F	K	H	L MAX.	L MIN.	G/J DRILL /TAP UN-2B	Mounting KITS			WT
													O-RING Buna.N	BOLT SHCS	LW HC	
M-2103-08-08	1/2	1.75	2.22	1.25	1.594	0.718	0.50	0.860	0.50	1.005	1.000	0.344	2210	31175	H-031	1.1
M-2104-08-08												5/16-18				
M-2103-12-12	3/4	2.00	2.81	1.25	2.000	0.937	0.75	1.070	0.50	1.255	1.250	0.406	2214	38200	H-038	1.5
M-2104-12-12												3/8-16				
M-2103-16-16	1	2.25	3.19	1.25	2.250	1.093	1.00	1.335	0.50	1.565	1.560	0.469	2219	44200	H-044	1.9
M-2104-16-16												7/16-14				
M-2103-20-20	1-1/4	2.75	3.75	1.25	2.625	1.250	1.25	1.680	0.50	1.755	1.750	0.531	2222	50225	H-050	2.7
M-2104-20-20												1/2-13				
M-2103-24-24	1-1/2	3.25	4.50	1.50	3.125	1.437	1.50	1.920	0.50	2.125	2.115	0.656	2225	63250	H-063	4.7
M-2104-24-24												5/8-11				
M-2103-32-32	2	4.00	5.25	1.75	3.812	1.750	1.94	2.411	0.62	2.500	2.490	0.781	2228	75300	H-075	7.8
M-2104-32-32												3/4-10				
M-2103-40-40	2-1/2	5.00	6.88	2.00	4.875	2.312	2.38	2.911	0.62	3.000	2.995	0.940	2232	88350	H-088	15.2
M-2104-40-40												7/8-9				
M-2103-48-48	3	6.00	8.50	2.50	6.000	2.812	2.94	3.540	0.62	3.625	3.615	1.19	2237	125450	H-125	28.0



**SAE Straight Thread In-Line Flanges**

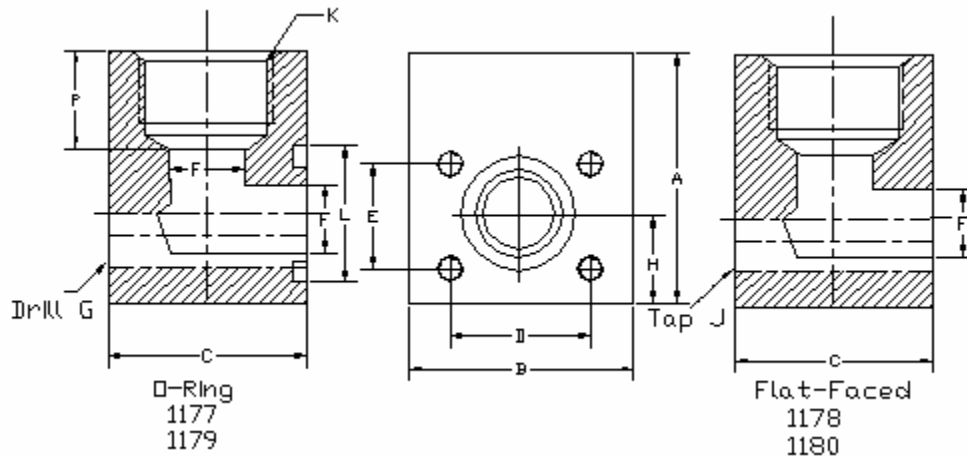
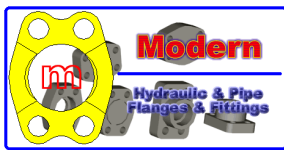
**Code 61 SAE Pattern**

Part. No.	PIPE SIZE	A	B	C	D	E	F	K	H	L MAX.	L MIN.	G/J DRILL /TAP UN-2B	Mounting KITS			WT
													O-RING Buna.N	BOLT SHCS	LW HC	
M-1173-08-08	1/2	1.50	2.12	1.25	1.500	0.688	0.50	3/4-16	0.38	1.005	1.000	0.344	2210	31125	H-031	0.9
M-1174-08-08												5/16-18				
M-1173-12-10	3/4	1.75	2.62	1.50	1.875	0.875	0.75	7/8-14	0.50	1.255	1.250	0.406	2214	38150	H-038	1.3
M-1174-12-10												3/8-16				
M-1173-12-12	3/4	1.75	2.62	1.50	1.875	0.875	1.00	1-1/16-12	0.50	1.565	1.560	0.406	2219	38150	H-038	1.4
M-1174-12-12												3/8-16				
M-1173-16-14	1	2.00	2.82	1.50	2.062	1.031	1.00	1-3/16-12	0.50	1.565	1.560	0.406	2219	38150	H-038	1.6
M-1174-16-14												3/8-16				
M-1173-16-16	1	2.00	2.82	1.50	2.062	1.031	1.00	1-5/16-12	0.50	1.565	1.560	0.406	2219	38150	H-038	1.7
M-1174-16-16												3/8-16				
M-1173-20-20	1-1/4	2.50	3.19	1.50	2.312	1.188	1.25	1-5/8-12	0.50	1.755	1.750	0.469	2222	44150	H-044	2.3
M-1174-20-20												7/16-14				
M-1173-24-24	1-1/2	2.75	3.75	1.75	2.750	1.406	1.50	1-7/8-12	0.50	2.125	2.115	0.531	2225	50175	H-050	3.5
M-1174-24-24												1/2-13				
M-1173-32-24	2	3.25	4.00	1.75	3.062	1.688	1.94	1-7/8-12	0.62	2.500	2.490	0.531	2228	50175	H-050	4.8
M-1174-32-24												1/2-13				
M-1173-32-32	2	3.25	4.00	1.75	3.062	1.688	1.94	2-1/2-12	0.62	2.500	2.490	1/2-13				3.9
M-1174-32-32												1/2-13				
M-1173-40-32	2-1/2	4.00	4.50	1.75	3.500	2.000	2.44	2-1/2-12	0.75	3.000	2.995	0.531	2232	50175	H-050	6.3
M-1174-40-32												1/2-13				
M-1174-64-64												5/8-11				

**SAE Straight Thread In-Line Flanges**

**Code 62 SAE Pattern**

Part. No.	PIPE SIZE	A	B	C	D	E	F	K	H	L MAX.	L MIN.	G/J DRILL /TAP UN-2B	Mounting KITS			WT
													O-RING Buna.N	BOLT SHCS	LW HC	
M-1175-08-08	1/2	1.75	2.22	1.25	1.594	0.718	0.50	3/4-16	0.50	1.005	1.000	0.344	2210	31125	H-031	1.1
M-1176-08-08												5/16-18				
M-1175-12-10	3/4	2.00	2.81	1.50	2.000	0.937	0.75	7/8-14	0.50	1.255	1.250	0.406	2214	38150	H-038	2.0
M-1176-12-10												3/8-16				
M-1175-12-12	3/4	2.00	2.81	1.50	2.000	0.937	0.75	1-1/16-12	0.50	1.255	1.250	0.406	2214	38150	H-038	1.8
M-1176-12-12												3/8-16				
M-1175-16-14	1	2.25	3.19	1.50	2.250	1.093	1.00	1-3/16-12	0.50	1.565	1.560	0.469	2219	44150	H-044	2.3
M-1176-16-14												7/16-14				
M-1175-16-16	1	2.25	3.19	1.50	2.250	1.093	1.00	1-5/16-12	0.50	1.565	1.560	0.469	2219	44150	H-044	2.3
M-1176-16-16												7/16-14				
M-1175-20-20	1-1/4	3.00	3.75	1.50	2.625	1.250	1.25	1-5/8-12	0.50	1.755	1.750	0.531	2222	50150	H-050	3.7
M-1176-20-20												1/2-13				
M-1175-24-24	1-1/2	3.25	4.50	1.75	3.125	1.437	1.50	1-7/8-12	0.50	2.125	2.115	0.656	2225	63175	H-063	5.5
M-1176-24-24												5/8-11				
M-1175-32-32	2	4.00	5.25	1.75	3.812	1.750	1.94	2-1/2-12	0.62	2.500	2.490	0.781	2228	75200	H-075	7.5
M-1176-32-32												3/4-10				



### SAE Straight Thread Elbow Flanges

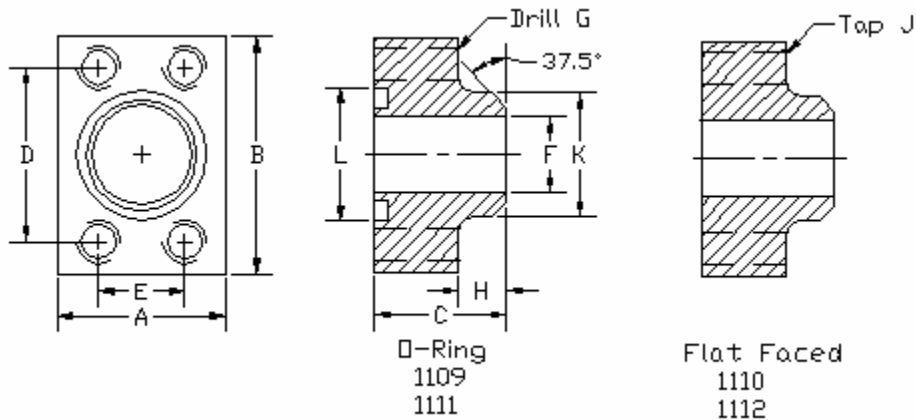
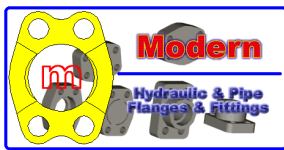
Code 61 SAE Pattern

Part. No.	PIPE SIZE	A	B	C	D	E	F	K	H	L MAX.	L MIN.	G/J DRILL /TAP UN-2B	Mounting KITS			WT
													O-RING Buna.N	BOLT SHCS	LW HC	
M-1177-08-08	1/2	2.00	2.12	1.44	1.500	0.688	0.50	3/4-16	0.38	1.005	1.000	0.344	2210	31200	H-031	1.5
M-1178-08-08												5/16-18				
M-1177-12-10	3/4	2.50	2.62	1.70	1.875	0.875	0.75	7/8-14	0.50	1.255	1.250	0.406	2214	38250	H-038	2.7
M-1178-12-10												3/8-16				
M-1177-12-12	3/4	2.50	2.62	1.70	1.875	0.875	0.75	1-1/16-12	0.50	1.255	1.250	0.406	2214	38250	H-038	2.5
M-1178-12-12												3/8-16				
M-1177-16-14	1	3.00	2.82	1.94	2.062	1.031	1.00	1-3/16-12	0.50	1.565	1.560	0.406	2219	38275	H-038	3.9
M-1178-16-14												3/8-16				
M-1177-16-16	1	3.00	2.82	1.94	2.062	1.031	1.00	1-5/16-12	0.50	1.565	1.560	0.406	2219	38275	H-038	3.7
M-1178-16-16												3/8-16				
M-1177-20-20	1-1/4	3.50	3.19	2.40	2.312	1.188	1.25	1-5/8-12	0.50	1.755	1.750	0.469	2222	44325	H-044	6.1
M-1178-20-20												7/16-14				
M-1177-24-24	1-1/2	4.00	3.75	2.90	2.750	1.406	1.50	1-7/8-12	0.50	2.125	2.115	0.531	2225	50400	H-050	9.8
M-1178-24-24												1/2-13				
M-1177-32-32	2	4.25	4.00	3.94	3.062	1.688	1.94	2-1/2-12	0.62	2.500	2.490	0.531	2228	50500	H-050	12.9
M-1178-32-32												1/2-13				

### SAE Straight Thread Elbow Flanges

Code 62 SAE Pattern

Part. No.	PIPE SIZE	A	B	C	D	E	F	K	H	L MAX.	L MIN.	G/J DRILL /TAP UN-2B	Mounting KITS			WT
													O-RING Buna.N	BOLT SHCS	LW HC	
M-1179-08-08	1/2	2.00	2.22	1.46	1.594	0.718	0.50	3/4-16	0.50	1.005	1.000	0.344	2210	31200	H-031	1.6
M-1180-08-08												5/16-18				
M-1179-12-12	3/4	2.50	2.81	1.70	2.000	0.937	0.75	7/8-14	0.50	1.255	1.250	0.406	2214	38250	H-038	3.0
M-1180-12-12												3/8-16				
M-1179-12-12	3/4	2.50	2.81	1.70	2.000	0.937	0.75	1-1/16-12	0.50	1.255	1.250	0.406	2214	38275	H-038	2.8
M-1180-12-12												3/8-16				
M-1179-16-16	1	3.00	3.19	1.96	2.250	1.093	1.00	1-3/16-12	0.50	1.565	1.560	0.469	2219	44275	H-044	4.5
M-1180-16-16												7/16-14				
M-1179-16-16	1	3.00	3.19	1.96	2.250	1.093	1.00	1-5/16-12	0.50	1.565	1.560	0.469	2219	44275	H-044	4.3
M-1180-16-16												7/16-14				
M-1179-20-20	1-1/4	4.00	3.75	2.44	2.625	1.250	1.25	1-5/8-12	0.50	1.755	1.750	0.531	2222	50325	H-050	8.6
M-1180-20-20												1/2-13				
M-1179-24-24	1-1/2	4.00	4.50	2.96	3.125	1.437	1.50	1-7/8-12	0.50	2.125	2.115	0.656	2225	63400	H-063	12.2
M-1180-24-24												5/8-11				
M-1179-32-32	2	5.00	5.25	3.94	3.812	1.750	1.94	2-1/2-12	0.62	2.500	2.490	0.781	2228	75500	H-075	21.1
M-1180-32-32												3/4-10				



### Butt Weld In-Line Flanges

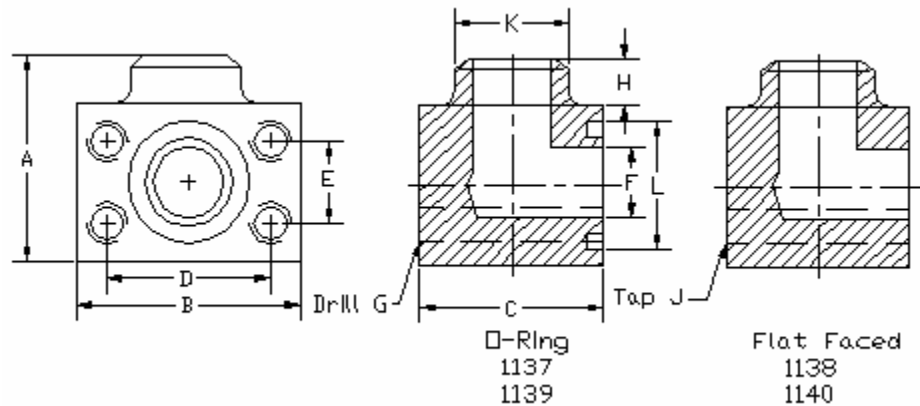
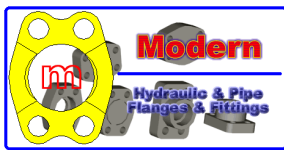
### Code 61 SAE Pattern

Part. No.	PIPE SIZE	A	B	C	D	E	F	K	H	L MAX.	L MIN.	G/J DRILL /TAP UN-2B	Mounting KITS			WT
													O-RING Buna.N	BOLT SHCS	LW HC	
M-1109-08-08	1/2	1.50	2.12	1.25	1.500	0.688	0.53	0.860	0.38	1.005	1.000	0.344	2210	31150	H-031	0.7
M-1110-08-08												5/16-18				
M-1109-12-12	3/4	1.75	2.62	1.25	1.875	0.875	0.75	1.070	0.50	1.255	1.250	0.406	2214	38150	H-038	1.0
M-1110-12-12												3/8-16				
M-1109-16-16	1	2.00	2.82	1.25	2.062	1.031	0.94	1.335	0.50	1.565	1.560	0.406	2219	38150	H-038	1.2
M-1110-16-16												3/8-16				
M-1109-20-20	1-1/4	2.50	3.19	1.25	2.312	1.188	1.25	1.680	0.50	1.755	1.750	0.469	2222	44150	H-044	1.6
M-1110-20-20												7/16-14				
M-1109-24-24	1-1/2	2.75	3.75	1.50	2.750	1.406	1.50	1.920	0.50	2.125	2.115	0.531	2225	50175	H-050	2.3
M-1110-24-24												1/2-13				
M-1109-32-32	2	3.25	4.00	1.50	3.062	1.688	1.94	2.411	0.62	2.500	2.490	0.531	2228	50175	H-050	2.8
M-1110-32-32												1/2-13				
M-1109-40-40	2-1/2	4.00	4.50	1.75	3.500	2.000	2.32	2.911	0.75	3.000	2.995	0.531	2232	50200	H-050	4.8
M-1110-40-40												1/2-13				
M-1109-48-48	3	4.50	5.31	2.00	4.188	2.438	2.90	3.540	0.75	3.625	3.615	0.656	2237	63250	H-063	7.2
M-1110-48-48												5/8-11				
M-1109-56-56	3-1/2	5.00	6.00	1.50	4.750	2.750	3.36	4.045	0.75	4.115	4.095	0.656	2241	63200	H-063	5.9
M-1110-56-56												5/8-11				
M-1109-64-64	4	5.50	6.38	1.50	5.125	3.062	3.83	4.550	0.75	4.615	4.595	0.656	2245	63200	H-063	6.7
M-1110-64-64												5/8-11				
M-1109-80-80	5	7.00	7.25	2.00	6.000	3.625	4.81	5.625	0.75	5.615	5.595	0.656	2253	63250	H-063	14.3
M-1110-80-80												5/8-11				

### Butt Weld In-Line Flanges

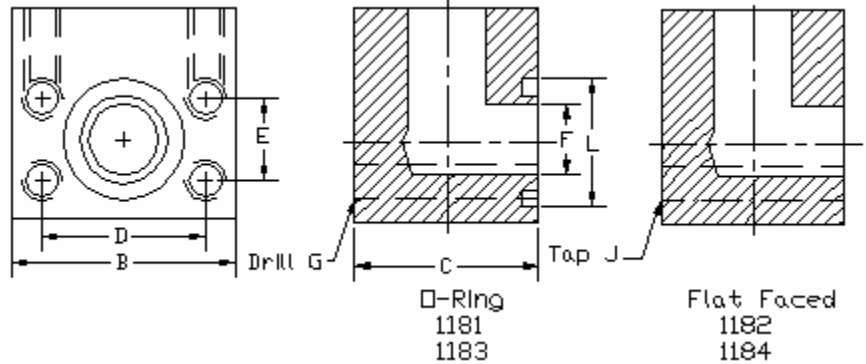
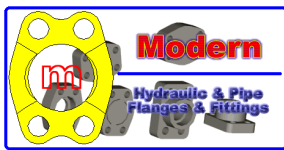
### Code 62 SAE Pattern

Part. No.	PIPE SIZE	A	B	C	D	E	F	K	H	L MAX.	L MIN.	G/J DRILL /TAP UN-2B	Mounting KITS			WT
													O-RING Buna.N	BOLT SHCS	LW HC	
M-1111-08-08	1/2	1.75	2.22	1.25	1.594	0.718	0.53	0.860	0.50	1.005	1.000	0.344	2210	31150	H-031	0.8
M-1112-08-08												5/16-18				
M-1111-12-12	3/4	2.00	2.81	1.25	2.000	0.937	0.75	1.070	0.50	1.255	1.250	0.406	2214	38150	H-038	1.3
M-1112-12-12												3/8-16				
M-1111-16-16	1	2.25	3.19	1.25	2.250	1.093	0.94	1.093	0.50	1.565	1.560	0.469	2219	44175	H-044	1.5
M-1112-16-16												7/16-14				
M-1111-20-20	1-1/4	2.75	3.75	1.25	2.625	1.250	1.25	1.250	0.50	1.755	1.750	0.531	2222	50175	H-050	2.1
M-1112-20-20												1/2-13				
M-1111-24-24	1-1/2	3.25	4.50	1.50	3.125	1.437	1.50	1.437	0.50	2.125	2.115	0.656	2225	63200	H-063	3.3
M-1112-24-24												5/8-11				
M-1111-32-32	2	4.00	5.25	1.75	3.812	1.750	1.94	1.750	0.62	2.500	2.490	0.781	2228	75250	H-075	5.9
M-1112-32-32												3/4-10				
M-1111-40-40	2-1/2	5.00	6.88	2.00	4.875	2.312	2.32	2.312	0.62	3.000	2.995	0.940	2232	88275	H-088	12.0
M-1112-40-40												7/8-9				
M-1111-48-48	3	6.00	8.50	2.50	6.000	2.812	2.90	2.812	0.62	3.625	3.615	1.19	2237	125400	H-125	23.3
M-1112-48-48												1-1/8-7				



Butt Weld Elbow Flanges													Code 61 SAE Pattern			
Part. No.	PIPE SIZE	A	B	C	D	E	F	K	H	L MAX.	L MIN.	G/J DRILL /TAP UN-2B	Mounting KITS			WT
													O-RING Buna.N	BOLT SHCS	LW HC	
M-1137-08-08	1/2	2.00	2.12	1.44	1.500	0.688	0.53	0.860	0.38	1.005	1.000	0.344	2210	31200	H-031	1.3
M-1138-08-08												5/16-18				
M-1137-12-12	3/4	2.25	2.62	1.70	1.875	0.875	0.75	1.070	0.50	1.255	1.250	0.406	2214	38250	H-038	2.0
M-1138-12-12												3/8-16				
M-1137-16-16	1	2.50	2.82	1.94	2.062	1.031	0.94	1.335	0.50	1.565	1.560	0.406	2219	38275	H-038	2.8
M-1138-16-16												3/8-16				
M-1137-20-20	1-1/4	3.00	3.19	2.40	2.312	1.188	1.25	1.680	0.50	1.755	1.750	0.469	2222	44325	H-044	4.8
M-1138-20-20												7/16-14				
M-1137-24-24	1-1/2	3.25	3.75	2.90	2.750	1.406	1.50	1.920	0.50	2.125	2.115	0.531	2225	50400	H-050	6.8
M-1138-24-24												1/2-13				
M-1137-32-32	2	3.75	4.00	3.40	3.062	1.688	1.94	2.411	0.62	2.500	2.490	0.531	2228	50450	H-050	9.5
M-1138-32-32												1/2-13				
M-1137-40-40	2-1/2	4.50	4.50	3.96	3.500	2.000	2.32	2.911	0.75	3.000	2.995	0.531	2232	50500	H-050	15.4
M-1138-40-40												1/2-13				
M-1137-48-48	3	5.00	5.31	4.96	4.188	2.438	2.90	3.540	0.75	3.625	3.615	0.656	2237	63600	H-063	24.2
M-1138-48-48												5/8-11				
M-1137-56-56	3-1/2	5.50	6.00	5.40	4.750	2.750	3.36	4.045	0.75	4.115	4.095	0.656	2241	63650	H-063	37.0
M-1138-56-56												5/8-11				
M-1137-64-64	4	6.00	6.38	5.96	5.125	3.062	3.83	4.550	0.75	4.615	4.595	0.656	2245	63700	H-063	48.0
M-1138-64-64												5/8-11				
M-1137-80-80	5	7.50	7.25	6.90	6.000	3.625	4.81	5.625	0.75	5.615	5.595	0.656	2253	63800	H-063	61.4
M-1138-80-80												5/8-11				

Butt Weld Elbow Flanges													Code 62 SAE Pattern			
Part. No.	PIPE SIZE	A	B	C	D	E	F	K	H	L MAX.	L MIN.	G/J DRILL /TAP UN-2B	Mounting KITS			WT
													O-RING Buna.N	BOLT SHCS	LW HC	
M-1139-08-08	1/2	2.25	2.22	1.46	1.594	0.718	0.53	0.860	0.50	1.005	1.000	0.344	2210	31200	H-031	1.6
M-1140-08-08												5/16-18				
M-1139-12-12	3/4	2.50	2.81	1.70	2.000	0.937	0.75	1.070	0.50	1.255	1.250	0.406	2214	38250	H-038	2.5
M-1140-12-12												3/8-16				
M-1139-16-16	1	2.75	3.19	2.21	2.250	1.093	0.94	1.093	0.50	1.565	1.560	0.469	2219	44300	H-044	4.1
M-1140-16-16												7/16-14				
M-1139-20-20	1-1/4	3.25	3.75	2.44	2.625	1.250	1.25	1.250	0.50	1.755	1.750	0.531	2222	50325	H-050	6.4
M-1140-20-20												1/2-13				
M-1139-24-24	1-1/2	3.75	4.50	2.96	3.125	1.437	1.50	1.437	0.50	2.125	2.115	0.656	2225	63400	H-063	10.2
M-1140-24-24												5/8-11				
M-1139-32-32	2	4.50	5.25	3.46	3.812	1.750	1.94	1.750	0.62	2.500	2.490	0.781	2228	75450	H-075	17.0
M-1140-32-32												3/4-10				
M-1139-40-40	2-1/2	5.50	6.88	4.50	4.875	2.312	2.32	2.312	0.62	3.000	2.995	0.940	2232	88600	H-088	33.2
M-1140-40-40												7/8-9				
M-1139-48-48	3	6.50	8.50	5.00	6.000	2.812	2.90	2.812	0.62	3.625	3.615	1.19	2237	125700	H-125	48.0
M-1140-48-48												1-1/8-7				



### Flanged Elbow Flanges

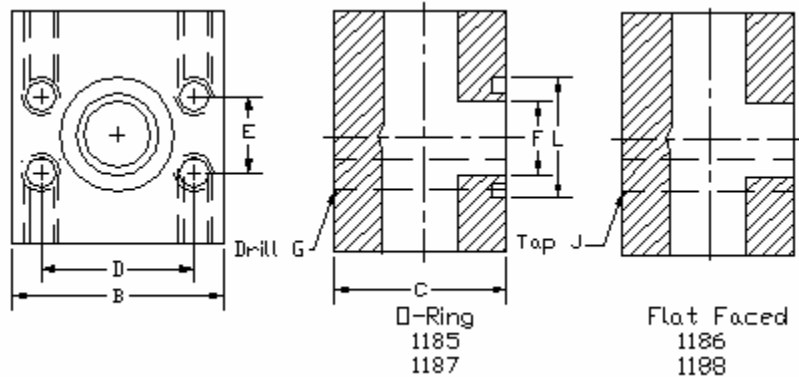
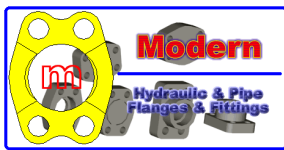
### Code 61 SAE Pattern

Part. No.	PIPE SIZE	A	B	C	D	E	F	K	H	L MAX.	L MIN.	G/J DRILL /TAP UN-2B	Mounting KITS			WT
													O-RING Buna.N	BOLT SHCS	LW HC	
M-1181-08-08	1/2	2.00	2.12	2.00	1.500	0.688	0.50	0.860	0.38	1.005	1.000	0.344	2210	31250	H-031	2.0
M-1182-08-08												5/16-18				
M-1181-12-12	3/4	2.50	2.62	2.25	1.875	0.875	0.75	1.070	0.50	1.255	1.250	0.406	2214	38300	H-038	3.5
M-1182-12-12												3/8-16				
M-1181-16-16	1	2.50	2.82	2.50	2.062	1.031	1.00	1.335	0.50	1.565	1.560	0.406	2219	38325	H-038	4.0
M-1182-16-16												3/8-16				
M-1181-20-20	1-1/4	3.00	3.19	3.00	2.312	1.188	1.25	1.680	0.50	1.755	1.750	0.469	2222	44400	H-044	6.4
M-1182-20-20												7/16-14				
M-1181-24-24	1-1/2	3.50	3.75	3.50	2.750	1.406	1.50	1.920	0.50	2.125	2.115	0.531	2225	50450	H-050	10.7
M-1182-20-20												1/2-13				
M-1181-32-32	2	4.00	4.00	4.00	3.062	1.688	1.94	2.411	0.62	2.500	2.490	0.531	2228	50500	H-050	13.6
M-1182-32-32												1/2-13				
M-1181-40-40	2-1/2	4.50	4.50	4.50	3.500	2.000	2.44	2.911	0.75	3.000	2.995	0.531	2232	50550	H-050	18.3
M-1182-40-40												1/2-13				
M-1181-48-48	3	5.50	5.31	5.50	4.188	2.438	2.94	3.540	0.75	3.625	3.615	0.656	2237	63650	H-063	31.7
M-1182-48-48												5/8-11				
M-1181-56-56	3-1/2	6.00	6.00	6.00	4.750	2.750	3.44	4.045	0.75	4.115	4.095	0.656	2241	63700	H-063	45.0
M-1182-56-56												5/8-11				
M-1181-64-64	4	7.00	6.38	7.00	5.125	3.062	3.94	4.550	0.75	4.615	4.595	0.656	2245	63800	H-063	58.2
M-1182-64-64												5/8-11				
M-1181-80-80	5	8.00	7.25	8.00	6.000	3.625	4.94	5.625	0.75	5.615	5.595	0.656	2253	63900	H-063	89.0
M-1182-80-80												5/8-11				

### Flanged Elbow Flanges

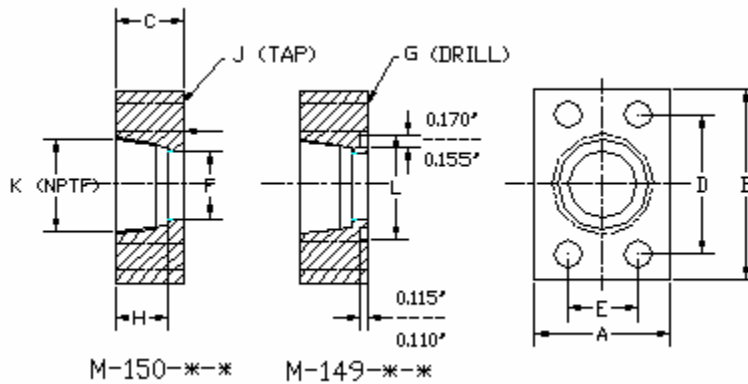
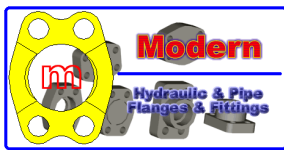
### Code 62 SAE Pattern

Part. No.	PIPE SIZE	A	B	C	D	E	F	K	H	L MAX.	L MIN.	G/J DRILL /TAP UN-2B	Mounting KITS			WT
													O-RING Buna.N	BOLT SHCS	LW HC	
M-1183-08-08	1/2	2.00	2.22	2.00	1.594	0.718	0.50	0.860	0.50	1.005	1.000	0.344	2210	31250	H-031	2.0
M-1184-08-08												5/16-18				
M-1183-12-12	3/4	2.50	2.81	2.50	2.000	0.937	0.75	1.070	0.50	1.255	1.250	0.406	2214	38325	H-038	4.3
M-1184-12-12												3/8-16				
M-1183-16-16	1	3.00	3.19	3.00	2.250	1.093	1.00	1.093	0.50	1.565	1.560	0.469	2219	44400	H-044	7.0
M-1184-16-16												7/16-14				
M-1183-20-20	1-1/4	3.50	3.75	3.50	2.625	1.250	1.25	1.250	0.50	1.755	1.750	0.531	2222	50450	H-050	10.8
M-1184-20-20												1/2-13				
M-1183-24-24	1-1/2	4.00	4.50	4.00	3.125	1.437	1.50	1.437	0.50	2.125	2.115	0.656	2225	63500	H-063	16.6
M-1184-20-20												5/8-11				
M-1183-32-32	2	5.00	5.25	5.00	3.812	1.750	1.94	1.750	0.62	2.500	2.490	0.781	2228	75600	H-075	29.7
M-1184-32-32												3/4-10				
M-1183-40-40	2-1/2	6.00	6.88	5.00	4.875	2.312	2.38	2.312	0.62	3.000	2.995	0.940	2232	88650	H-088	47.9
M-1184-40-40												7/8-9				
M-1183-48-48	3	7.00	8.50	6.00	6.000	2.812	2.94	2.812	0.62	3.625	3.615	1.19	2237	125800	H-125	85.0
M-1184-48-48												1-1/8-7				



Flanged Tee Flanges										Code 61 SAE Pattern				
Part. No.	PIPE SIZE	A	B	C	D	E	F	L MAX.	L MIN.	G/J DRILL /TAP UN-2B	Mounting KITS			WT
											O-RING Buna.N	BOLT SHCS	LW HC	
M-1185-08-08	1/2	2.50	2.12	2.00	1.500	0.688	0.50	1.005	1.000	0.344	2210	31250	H-031	2.5
M-1186-08-08										5/16-18				
M-1185-12-12	3/4	3.00	2.62	2.25	1.875	0.875	0.75	1.255	1.250	0.406	2214	38300	H-038	3.6
M-1186-12-12										3/8-16				
M-1185-16-16	1	3.50	2.82	2.50	2.062	1.031	1.00	1.565	1.560	0.406	2219	38325	H-038	4.6
M-1186-16-16										3/8-16				
M-1185-20-20	1-1/4	4.00	3.19	3.00	2.312	1.188	1.25	1.755	1.750	0.469	2222	44400	H-044	7.1
M-1186-20-20										7/16-14				
M-1185-24-24	1-1/2	4.00	3.75	3.50	2.750	1.406	1.50	2.125	2.115	0.531	2225	50450	H-050	11.2
M-1186-20-20										1/2-13				
M-1185-32-32	2	4.25	4.00	4.00	3.062	1.688	1.94	2.500	2.490	0.531	2228	50500	H-050	13.8
M-1186-32-32										1/2-13				
M-1185-40-40	2-1/2	4.50	4.50	4.50	3.500	2.000	2.44	3.000	2.995	0.531	2232	50550	H-050	17.5
M-1186-40-40										1/2-13				
M-1185-48-48	3	5.50	5.31	5.50	4.188	2.438	2.94	3.625	3.615	0.656	2237	63650	H-063	30.2
M-1186-48-48										5/8-11				
M-1185-56-56	3-1/2	7.00	6.00	6.00	4.750	2.750	3.44	4.115	4.095	0.656	2241	63700	H-063	47.0
M-1186-56-56										5/8-11				
M-1185-64-64	4	7.00	6.38	7.00	5.125	3.062	3.94	4.615	4.595	0.656	2245	63800	H-063	55.0
M-1186-64-64										5/8-11				
M-1185-80-80	5	9.00	7.25	8.00	6.000	3.625	4.94	5.615	5.595	0.656	2253	63900	H-063	84.0
M-1186-80-80										5/8-11				

Flanged Tee Flanges										Code 62 SAE Pattern				
Part. No.	PIPE SIZE	A	B	C	D	E	F	L MAX.	L MIN.	G/J DRILL /TAP UN-2B	Mounting KITS			WT
											O-RING Buna.N	BOLT SHCS	LW HC	
M-1187-08-08	1/2	2.50	2.22	2.00	1.594	0.718	0.50	1.005	1.000	0.344	2210	31250	H-031	2.7
M-1188-08-08										5/16-18				
M-1187-12-12	3/4	3.00	2.81	2.50	2.000	0.937	0.75	1.255	1.250	0.406	2214	38325	H-038	5.1
M-1188-12-12										3/8-16				
M-1187-16-16	1	3.50	3.19	3.00	2.250	1.093	1.00	1.565	1.560	0.469	2219	44400	H-044	7.7
M-1188-16-16										7/16-14				
M-1187-20-20	1-1/4	4.00	3.75	3.50	2.625	1.250	1.25	1.755	1.750	0.531	2222	50450	H-050	11.9
M-1188-20-20										1/2-13				
M-1187-24-24	1-1/2	4.50	4.50	4.00	3.125	1.437	1.50	2.125	2.115	0.656	2225	63500	H-063	17.8
M-1188-20-20										5/8-11				
M-1187-32-32	2	5.00	5.25	5.00	3.812	1.750	1.94	2.500	2.490	0.781	2228	75600	H-075	27.8
M-1188-32-32										3/4-10				
M-1187-40-40	2-1/2	7.00	7.00	5.00	4.875	2.312	2.38	3.000	2.995	0.940	2232	88650	H-088	54.5
M-1188-40-40										7/8-9				
M-1187-48-48	3	9.00	8.50	6.00	6.000	2.812	2.94	3.625	3.615	1.19	2237	125800	H-125	103.
M-1188-48-48										1-1/8-7				



### NPTF Thread Straight Flanges

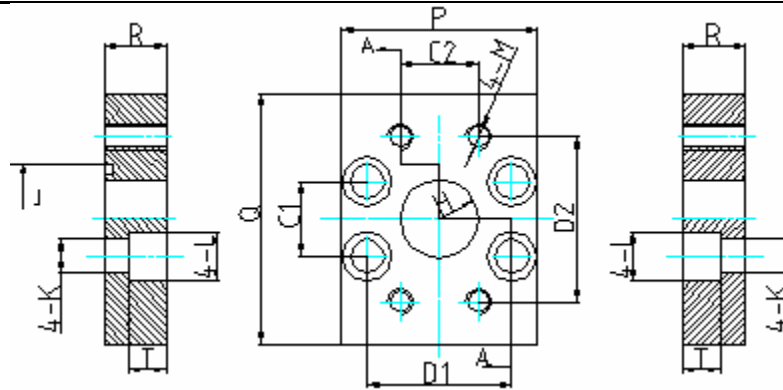
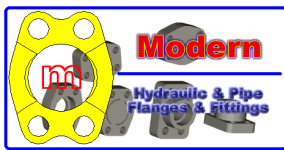
SAE Pattern Code 61

Part. No.	PIPE SIZE	A	B	C	D	E	F	K	H	L MAX.	L MIN.	G/J DRILL /TAP UN-2B	Mounting KITS			WT
													O-RING Buna.N	BOLT SHCS	LW HC	
M-1149-08-08	1/2	1.50	2.12	1.25	1.500	0.688	0.50	1/2	1.06	1.005	1.000	0.344	2210	31175	H-031	0.8
M-1150-08-08												5/16-18				
M-1149-12-12	3/4	1.75	2.62	1.25	1.875	0.875	0.75	3/4	1.06	1.255	1.250	0.406	2214	38200	H-038	1.2
M-1150-12-12												3/8-16				
M-1149-16-16	1	2.00	2.82	1.50	2.062	1.031	1.00	1	1.25	1.565	1.560	0.406	2219	38225	H-038	1.7
M-1150-16-16												3/8-16				
M-1149-20-20	1-1/4	2.50	3.19	1.50	2.312	1.188	1.25	1-1/4	1.31	1.755	1.750	0.469	2222	44225	H-044	2.3
M-1150-20-20												7/16-14				
M-1149-24-24	1-1/2	2.75	3.75	1.75	2.750	1.406	1.50	1-1/2	1.31	2.125	2.115	0.531	2225	50250	H-050	3.6
M-1150-24-24												1/2-13				
M-1149-32-32	2	3.25	4.00	1.75	3.062	1.688	1.94	2	1.31	2.500	2.490	0.531	2228	50250	H-050	4.2
M-1150-32-32												1/2-13				
M-1149-40-40	2-1/2	4.00	4.50	2.00	3.500	2.000	2.44	2-1/2	1.75	3.000	2.995	0.531	2232	50275	H-050	6.5
M-1150-40-40												1/2-13				
M-1149-48-48	3	4.50	5.50	2.25	4.188	2.438	2.94	3	2.00	3.625	3.615	0.656	2237	63350	H-063	9.8
M-1150-48-48												5/8-11				
M-1149-56-56	3-1/2	5.00	6.00	2.25	4.750	2.750	3.44	3-1/2		4.115	4.095	0.656	2241	63350	H-063	11.0
M-1150-56-56												5/8-11				
M-1149-64-64	4	5.50	6.50	2.50	5.125	3.062		4		4.615	4.595	0.656	2245	63350	H-063	14.5
M-1150-64-64												5/8-11				

### NPTF Thread Straight Flanges

SAE Pattern Code 62

Part. No.	PIPE SIZE	A	B	C	D	E	F	K	H	L MAX.	L MIN.	G/J DRILL /TAP UN-2B	Mounting KITS			WT
													O-RING Buna.N	BOLT SHCS	LW HC	
M-1151-08-08	1/2	1.75	2.22	1.25	1.594	0.718	0.50	1/2	1.06	1.005	1.000	0.344	2210	31175	H-031	1.2
M-1152-08-08												5/16-18				
M-1151-12-12	3/4	2.00	2.81	1.25	2.000	0.937	0.75	3/4	1.06	1.255	1.250	0.406	2214	38200	H-038	1.5
M-1152-12-12												3/8-16				
M-1151-16-16	1	2.25	3.19	1.50	2.250	1.093	1.00	1	1.25	1.565	1.560	0.469	2219	44225	H-044	2.5
M-1152-16-16												7/16-14				
M-1151-20-20	1-1/4	2.75	3.75	1.50	2.625	1.250	1.25	1-1/4	1.31	1.755	1.750	0.531	2222	50250	H-050	3.2
M-1152-20-20												1/2-13				
M-1151-24-24	1-1/2	3.25	4.50	1.75	3.125	1.437	1.50	1-1/2	1.31	2.125	2.115	0.656	2225	63275	H-063	5.5
M-1152-24-24												5/8-11				
M-1151-32-32	2	4.00	5.25	1.75	3.812	1.750	1.94	2	1.31	2.500	2.490	0.781	2228	75300	H-075	7.5
M-1152-32-32												3/4-10				
M-1151-40-40	2-1/2	5.00	6.88	2.00	4.875	2.312	2.44	2-1/2	1.75	3.000	2.995	0.940	2232	88350	H-088	14.7
M-1152-40-40												7/8-9				
M-1151-48-48	3	6.00	8.50	2.50	6.000	2.812	2.94	3	2.00	3.625	3.615	1.19	2237	125450	H-125	27.0
M-1152-48-48												1-1/8-7				



M-1315/1339

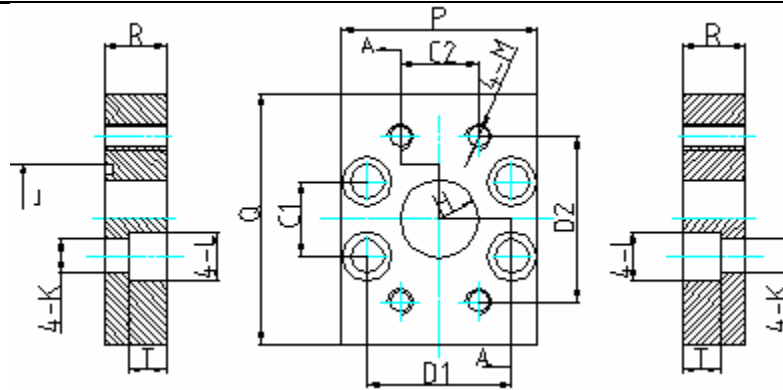
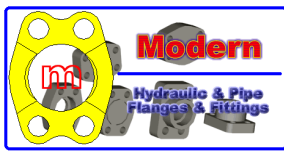
M-1316/1340

### Code 61/Code 62 Transition

Part. No.	Code 62 Comp	Code 61 O-Ring	P	Q	R	C1	D1	C2	D2	H	K	M UNC-2B	Mounting KITS			WT
													O-RING Buna.N	BOLT SHCS	LW HC	
M-1315-08-08	1/2	1/2	2.13	2.50	0.75	0.688	1.500	0.718	1.594	0.50	0.344	5/16-18	2210	31175	H-031	0.95
M-1316-08-08																
M-1315-12-12	3/4	3/4	2.63	3.00	0.75	0.875	1.875	0.937	2.000	0.75	0.406	3/8-16	2214	38200	H-038	1.35
M-1316-12-12																
M-1315-16-16	1	1	3.00	3.19	0.75	1.031	2.062	1.093	2.250	1.00	0.406	7/16-14	2219	38225	H-044	1.60
M-1316-16-16																
M-1315-20-20	1-1/4	1-1/4	3.13	4.00	1.00	1.188	2.312	1.250	2.625	1.25	0.469	1/2-13	2222	44225	H-050	2.75
M-1316-20-20																
M-1315-24-24	1-1/2	1-1/2	4.00	4.50	1.00	1.406	2.750	1.437	3.125	1.50	0.531	5/8-11	2225	50250	H-050	3.95
M-1316-24-24																
M-1315-32-32	2	2	4.00	5.25	1.50	1.688	3.062	1.750	3.812	2.00	0.531	3/4-10	2228	50250	H-050	4.50
M-1316-32-32																

### Code 62/Code 61 Transition

Part. No.	Code 61 Comp	Code 62 O-Ring	P	Q	R	C1	D1	C2	D2	H	K	M UNC-2B	Mounting KITS			WT
													O-RING Buna.N	BOLT SHCS	LW HC	
M-1339-08-08	1/2	1/2	2.50	2.13	0.75	0.718	1.594	0.688	1.500	0.50	0.344	5/16-18	2210	31175	H-031	0.95
M-1340-08-08																
M-1339-12-12	3/4	3/4	2.81	2.50	0.75	0.937	2.000	0.875	1.875	0.75	0.406	3/8-16	2214	38200	H-038	1.15
M-1340-12-12																
M-1339-16-16	1	1	3.19	3.00	0.75	1.093	2.250	1.031	2.062	1.00	0.49	3/8-16	2219	38225	H-038	2.10
M-1340-16-16																
M-1339-20-20	1-1/4	1-1/4	3.75	3.00	1.00	1.250	2.625	1.188	2.312	1.25	0.531	7/16-14	2222	44225	H-044	2.30
M-1340-20-20																
M-1339-24-24	1-1/2	1-1/2	4.50	4.00	1.00	1.437	3.125	1.406	2.750	1.50	0.656	1/2-13	2225	50250	H-050	5.80
M-1340-24-24																
M-1339-32-32	2	2	5.25	4.00	1.50	1.750	3.812	1.688	3.062	2.00	0.781	1/2-13	2228	50250	H-050	6.00
M-1340-32-32																

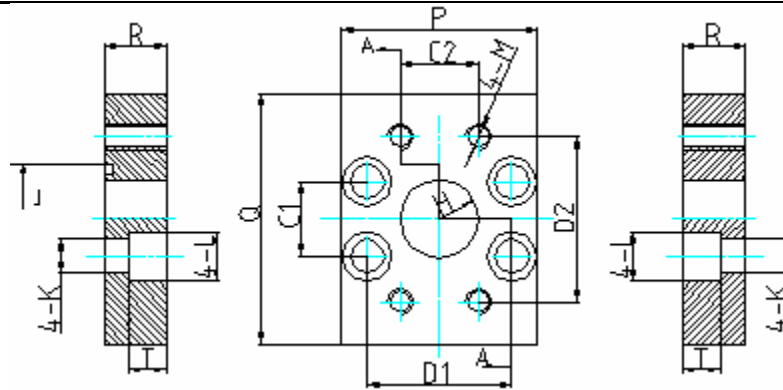
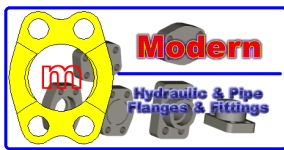


M-1317/1341

M-1318/1342

### Code 61 Step Down & Orientation Transitions

Part. No.	Code 61 Comp	Code 61 O-Ring	P	Q	R	C1	D1	C2	D2	H	K	M UNC-2B	Mounting KITS			WT
													O-RING Buna.N	BOLT SHCS	LW HC	
M-1317-08-08	1/2	1/2	2.00	2.00	0.75	0.688	1.500	0.688	1.500	0.50	0.344	5/16-18	2210	31075	H-031	0.7
M-1318-08-08																
M-1317-12-08	1/2	3/4	3.00	2.13	0.75	0.875	1.875	0.688	1.500	0.50	0.406	5/16-18	2214	31075	H-031	1.1
M-1318-12-08																
M-1317-12-12	3/4	3/4	2.50	2.50	0.75	0.875	1.875	0.875	1.875	0.75	0.406	3/8-16	2214	3075	H-031	1.0
M-1318-12-12																
M-1317-16-12	3/4	1	3.00	2.56	0.75	1.031	2.062	0.875	1.875	0.75	0.406	3/8-16	2219	38075	H-031	1.4
M-1318-16-12																
M-1317-16-16	1	1	3.00	2.75	0.75	1.031	2.062	1.031	2.062	1.00	0.406	3/8-16	2219	38075	H-031	1.4
M-1318-16-16																
M-1317-20-12	3/4	1-1/4	3.13	2.50	1.00	1.188	2.312	0.875	1.875	0.75	0.469	3/8-16	2222	38100	H-031	1.7
M-1318-20-12																
M-1317-20-16	1	1-1/4	3.13	3.00	1.00	1.188	2.312	1.031	2.062	1.00	0.469	3/8-16	2222	38100	H-031	2.1
M-1318-20-16																
M-1317-20-20	1-1/4	1-1/4	3.13	3.00	1.00	1.188	2.312	1.188	2.312	1.25	0.469	7/16-14	2222	44100	H-031	1.9
M-1318-20-20																
M-1317-24-16	1	1-1/2	4.00	2.75	1.00	1.406	2.750	1.031	2.062	1.00	0.531	3/8-16	2225	38100	H-031	2.4
M-1318-24-16																
M-1317-24-20	1-1/4	1-1/2	4.00	3.13	1.00	1.406	2.750	1.188	2.312	1.25	0.531	7/16-14	2225	44100	H-031	2.7
M-1318-24-20																
M-1317-24-24	1-1/2	1-1/2	4.00	3.69	1.00	1.406	2.750	1.406	2.750	1.50	0.531	1/2-13	2225	50100	H-031	3.2
M-1318-24-24																
M-1317-32-20	1-1/4	2	4.00	3.13	1.00	1.688	3.062	1.188	2.312	1.25	0.531	7/16-14	2228	44100	H-038	4.1
M-1318-32-20																
M-1317-32-24	1-1/2	2	4.00	3.75	1.50	1.688	3.062	1.406	2.750	1.50	0.531	1/2-13	2228	50150	H-044	4.9
M-1318-32-24																
M-1317-32-32	2	2	4.00	4.00	1.50	1.688	3.062	1.688	3.062	2.00	0.531	1/2-13	2228	50150	H-050	4.7
M-1318-32-32																
M-1317-40-24	1-1/2	2-1/2	4.50	4.00	1.50	2.000	3.500	1.406	2.750	1.50	0.531	1/2-13	2232	50150	H-050	6.2
M-1318-40-24																
M-1317-40-32	2	2-1/2	4.50	4.00	1.50	2.000	3.500	1.688	3.062	2.00	0.531	1/2-13	2232	50150	H-050	5.6
M-1318-40-32																
M-1317-40-40	2-1/2	2-1/2	4.50	4.50	1.50	2.000	3.500	2.000	3.500	2.50	0.531	1/2-13	2232	50150	H-050	5.8
M-1318-40-40																
M-1317-48-32	2	3	5.50	4.00	1.50	2.438	4.188	1.688	3.062	2.00	0.656	1/2-13	2228	50150	H-050	6.9
M-1318-48-32																
M-1317-48-40	2-1/2	3	5.31	5.00	1.50	2.438	4.188	2.000	3.500	2.50	0.656	1/2-13	2232	50150	H-050	8.1
M-1318-48-40																
M-1317-48-48	3	3	5.50	5.31	1.50	2.438	4.188	2.438	4.188	3.00	0.656	5/8-11	2237	63150	H-063	8.3
M-1318-48-48																



M-1317/1341

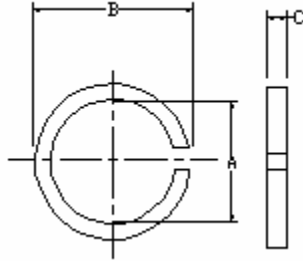
M-1318/1342

### Code 62 Step Down & Orientation Transitions

Part. No.	Code 62 Comp	Code 62 O-Ring	P	Q	R	C1	D1	C2	D2	H	K	M UNC-2B	Mounting KITS			WT
													O-RING Buna.N	BOLT SHCS	LW HC	
M-1341-08-08	1/2	1/2	2.50	2.25	0.75	0.718	1594	0.718	1.594	0.5	0.344	5/16-18	2210	31075	H-031	1.0
M-1342-08-08																
M-1341-12-08	1/2	3/4	3.00	2.22	0.75	0.937	2.000	0.718	1.594	0.5	0.406	5/16-18	2214	31075	H-031	1.2
M-1342-12-08																
M-1341-12-12	3/4	3/4	3.00	2.81	0.75	0.937	2.000	0.937	2.000	0.75	0.406	3/8-16	2214	38075	H-038	1.5
M-1342-12-12																
M-1341-16-12	3/4	1	3.19	3.00	1.00	1.093	2.250	0.937	2.000	0.75	0.469	3/8-16	2219	38100	H-038	2.2
M-1342-16-12																
M-1341-16-16	1	1	3.50	3.19	1.00	1.093	2.250	1.093	2.250	1.00	0.469	7/16-14	2219	44100	H-044	2.6
M-1342-16-16																
M-1341-20-12	3/4	1-1/4	4.00	2.88	1.00	1.250	2.625	0.937	2.000	0.75	0.531	3/8-16	2222	38100	H-038	2.7
M-1342-20-12																
M-1341-20-16	1	1-1/4	4.00	3.19	1.00	1.250	2.625	1.093	2.250	1.00	0.531	7/16-14	2222	44100	H-044	2.9
M-1342-20-16																
M-1341-20-20	1-1/4	1-1/4	4.00	3.75	1.00	1.250	2.625	1.250	2.625	1.25	0.531	1/2-13	2222	50100	H-050	4.0
M-1342-20-20																
M-1341-24-16	1	1-1/2	4.50	3.19	1.50	1.437	3.125	1.093	2.250	1.00	0.656	7/16-14	2215	44150	H-044	4.6
M-1342-24-16																
M-1341-24-20	1-1/4	1-1/2	4.50	4.00	1.50	1.437	3.125	1.250	2.625	1.25	0.656	1/2-13	2228	50150	H-050	6.0
M-1342-24-20																
M-1341-24-24	1-1/2	1-1/2	4.50	4.44	1.50	1.437	3.125	1.437	3.125	1.50	0.656	5/8-11	2228	63150	H-063	6.6
M-1342-24-24																
M-1341-32-20	1-1/4	2	5.25	3.75	1.50	1.750	3.812	1.250	2.625	1.25	0.781	1/2-13	2232	50150	H-050	6.2
M-1342-32-20																
M-1341-32-24	1-1/2	2	5.25	5.00	1.50	1.750	3.812	1.437	3.125	1.50	0.781	5/8-11	2232	63150	H-063	8.8
M-1342-32-24																
M-1341-32-32	2	2	5.25	5.25	1.50	1.750	3.812	1.750	3.812	2.00	0.781	3/4-10	2232	75150	H-075	8.8
M-1342-32-32																

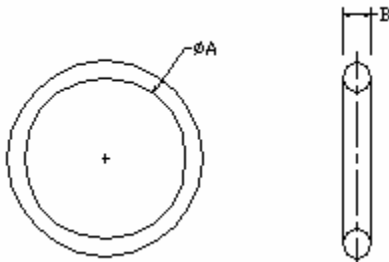


**High Collar Spring Lock Washers For  
Socket Head Cap Screws**



Part No	Size	A ID	B OD	C
H(L)-31	5/16	0.32	0.46	0.09
H(L)-38	3/8	0.38	0.55	0.12
H(L)-44	7/16	0.45	0.65	0.14
H(L)-50	1/2	0.51	0.74	0.17
H(L)-56	9/16	0.57	0.82	0.19
H(L)-63	5/8	0.64	0.92	0.20
H(L)-75	3/4	0.76	1.11	0.22
H(L)-88	7/8	0.89	1.30	0.23
H(L)-112	1-1/8	1.14	1.70	0.31

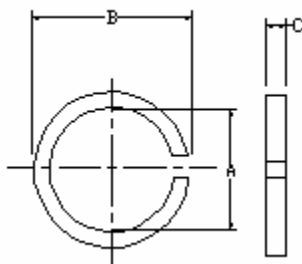
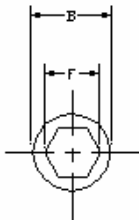
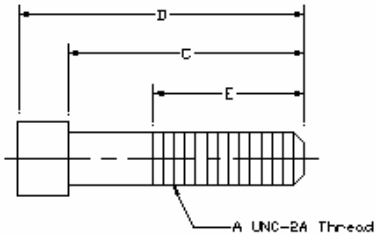
**90 Duro BUNA N. O-RING**



Part No	Size	A	B
2210	1/2	0.75	0.138
2214	3/4	1.00	0.138
2219	1	1.31	0.138
2222	1-1/4	1.50	0.138
2225	1-1/2	1.88	0.138
2228	2	2.25	0.138
2232	2-1/2	2.75	0.138
2237	3	3.38	0.138
2241	3-1/2	3.88	0.138
2245	4	4.38	0.138
2253	5	5.61	0.138

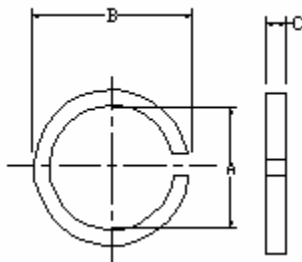
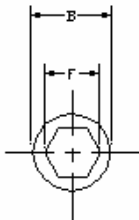
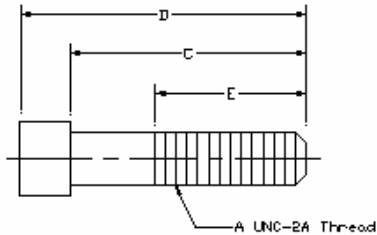


### Socket Head Bolt SAE Gr.8 Bolts



Part No	Description	A	B	C	D	E	F
31100	5/16-18x1	5/16-18	0.47	1.00	1.31	0.65	0.25
31125	5/16-18x1-1/4	5/16-18	0.47	1.25	1.56	1.12	0.25
31150	5/16-18x1-1/2	5/16-18	0.47	1.50	1.81	1.12	0.25
31175	5/16-18x1-3/4	5/16-18	0.47	1.75	2.06	1.12	0.25
31200	5/16-18x2	5/16-18	0.47	2.00	2.31	1.12	0.25
31250	5/16-18x2-1/2	5/16-18	0.47	2.50	2.81	1.12	0.25
31300	5/16-18x3	5/16-18	0.47	3.00	3.31	1.12	0.25
38100	3/8-16x1	3/8-16	0.56	1.00	1.38	1.00	0.31
38125	3/8-16x1-1/4	3/8-16	0.56	1.25	1.63	1.25	0.31
38150	3/8-16x1-1/2	3/8-16	0.56	1.50	1.88	1.25	0.31
38175	3/8-16x1-3/4	3/8-16	0.56	1.75	2.13	1.25	0.31
38200	3/8-16x2	3/8-16	0.56	2.00	2.38	1.25	0.31
38225	3/8-16x2-1/4	3/8-16	0.56	2.25	2.63	1.25	0.31
38250	3/8-16x2-1/2	3/8-16	0.56	2.50	2.88	1.25	0.31
38275	3/8-16x2-3/4	3/8-16	0.56	2.75	3.13	1.25	0.31
38300	3/8-16x3	3/8-16	0.56	3.00	3.38	1.25	0.31
38325	3/8-16x3-1/4	3/8-16	0.56	3.25	3.63	1.25	0.31
38350	3/8-16x3-1/2	3/8-16	0.56	3.50	3.88	1.25	0.31
38400	3/8-16x4	3/8-16	0.56	4.00	4.38	1.25	0.31
44100	7/16-14x1	7/16-14	0.66	1.00	1.44	1.38	0.38
44150	7/16-14x1-1/2	7/16-14	0.66	1.50	1.94	1.38	0.38
44175	7/16-14x1-3/4	7/16-14	0.66	1.75	2.19	1.38	0.38
44200	7/16-14x2	7/16-14	0.66	2.00	2.44	1.38	0.38
44225	7/16-14x2-1/4	7/16-14	0.66	2.25	2.69	1.38	0.38
44275	7/16-14x2-3/4	7/16-14	0.66	2.75	3.19	1.38	0.38
44300	7/16-14x3	7/16-14	0.66	3.00	3.44	1.38	0.38
44325	7/16-14x3-1/4	7/16-14	0.66	3.25	3.69	1.38	0.38
44400	7/16-14x4	7/16-14	0.66	4.00	4.44	1.38	0.38
50100	1/2-13x1	1/2-13	0.75	1.00	1.50	1.50	0.38
50125	1/2-13x1-1/4	1/2-13	0.75	1.25	1.75	1.50	0.38
50150	1/2-13x1-1/2	1/2-13	0.75	1.50	2.00	1.50	0.38
50175	1/2-13x1-3/4	1/2-13	0.75	1.75	2.25	1.50	0.38
50200	1/2-13x2	1/2-13	0.75	2.00	2.50	1.50	0.38
50225	1/2X2-1/4	1/2-13	0.75	2.25	2.75	1.50	0.38
50250	1/2-13x2-1/2	1/2-13	0.75	2.50	3.00	1.50	0.38
50275	1/2-13x2-3/4	1/2-13	0.75	2.75	3.25	1.50	0.38
50300	1/2-13x3	1/2-13	0.75	3.00	3.50	1.50	0.38
50325	1/2-13x3-1/4	1/2-13	0.75	3.25	3.75	1.50	0.38
50400	1/2-13x4	1/2-13	0.75	4.00	4.50	1.50	0.38
50450	1/2-13x4-1/2	1/2-13	0.75	4.50	5.00	1.50	0.38
50500	1/2-13x5	1/2-13	0.75	5.00	5.50	1.50	0.38

### Socket Head Bolt SAE Gr.8 Bolts



Part No	Description	A	B	C	D	E	F
63125	5/8-11x1-1/4	5/8-1	0.94	1.25	1.87	1.75	0.50
63175	5/8-11x1-3/4	5/8-11	0.94	1.75	2.37	1.75	0.50
63200	5/8-11X2	5/8-11	0.94	2.00	2.62	1.75	0.50
63225	5/8-11x2-1/4	5/8-11	0.94	2.25	2.87	1.75	0.50
63250	5/8-11x2-1/2	5/8-11	0.94	2.50	3.12	1.75	0.50
63275	5/8-11x2-3/4	5/8-11	0.94	2.75	3.37	1.75	0.50
63300	5/8-11x3	5/8-11	0.94	3.00	3.62	1.75	0.50
63350	5/8-11x3-1/2	5/8-11	0.94	3.50	4.12	1.75	0.50
63400	5/8-11x4	5/8-11	0.94	4.00	4.62	1.75	0.50
63500	5/8-11x5	5/8-11	0.94	5.00	5.62	1.75	0.50
63600	5/8-11x6	5/8-11	0.94	6.00	6.62	1.75	0.50
63650	5/8-11x6-1/2	5/8-11	0.94	6.50	7.12	1.75	0.50
63700	5/8-11x7	5/8-11	0.94	7.00	7.62	1.75	0.50
75150	3/4-10X1-1/2	3/4-10	1.12	1.50	2.25	2.00	0.62
75175	3/4-10x1-3/4	3/4-10	1.12	1.75	2.50	2.00	0.62
75200	3/4-10x2	3/4-10	1.12	2.00	2.75	2.00	0.62
75225	3/4-10x2-1/4	3/4-10	1.12	2.25	3.00	2.00	0.62
75250	3/4-10x2-1/2	3/4-10	1.12	2.50	3.25	2.00	0.62
75300	3/4-10x3	3/4-10	1.12	3.00	3.75	2.00	0.62
75400	3/4-10x4	3/4-10	1.12	4.00	4.75	2.00	0.62
75450	3/4-10x4-1/2	3/4-10	1.12	4.50	5.25	2.00	0.62
75500	3/4-10x5	3/4-10	1.12	5.00	5.75	2.00	0.62
75600	3/4-10x6	3/4-10	1.12	6.00	6.75	2.00	0.62
88175	7/8-9X1-3/4	7/8-9	1.31	1.75	2.50	2.25	0.75
88200	7/8-9x2	7/8-9	1.31	2.00	2.75	2.25	0.75
88250	7/8-9x2-1/2	7/8-9	1.31	2.50	3.25	2.25	0.75
88275	7/8-9x2-3/4	7/8-9	1.31	2.75	3.50	2.25	0.75
88300	7/8-9x3	7/8-9	1.31	3.00	3.75	2.25	0.75
88350	7/8-9x3-1/2	7/8-9	1.31	3.50	4.25	2.25	0.75
88550	7/8-9x5-1/2	7/8-9	1.31	5.50	6.25	2.25	0.75
88600	7/8-9x6	7/8-9	1.31	6.00	6.75	2.25	0.75
88700	7/8-9x7	7/8-9	1.31	7.00	7.75	2.25	0.75
100300	1-8x3	1-8	1.50	3.00	3.87	2.53	0.87
100325	1-8x3-1/4	1-8	1.50	3.25	4.12	2.53	0.87
100350	1-8x3-1/2	1-8	1.50	3.50	4.37	2.53	0.87
100400	1-8x4	1-8	1.50	4.00	4.87	2.53	0.87
125225	1-1/8-7x2-1/4	1-1/8-7	1.68	2.25	3.25	2.81	1.00
125400	1-1/8-7x4	1-1/8-7	1.68	4.00	5.00	2.81	1.00
125450	1-1/8-7x4-1/2	1-1/8-7	1.68	4.50	5.50	2.81	1.00
125700	1-1/8-7x7	1-1/8-7	1.68	7.00	8.00	2.81	1.00

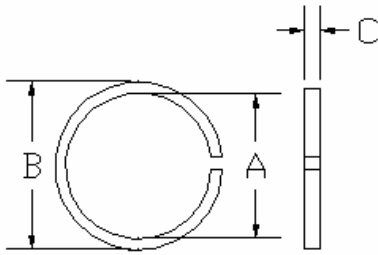


Figure 1

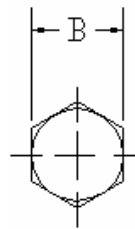
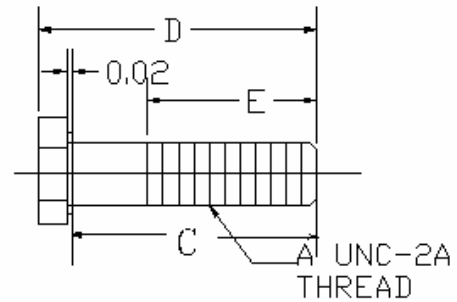


Figure 2



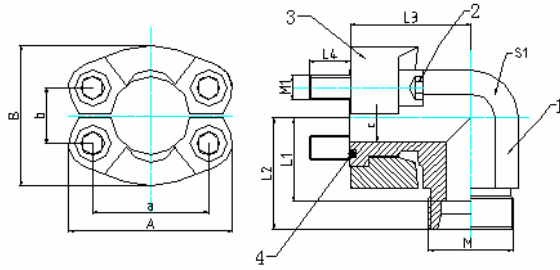
**Spring Lock Washers-For Split Flange FIG. 1**

Part No.	Size	B OD	A ID	C THK
L-31	5/16	0.57	0.32	0.06
L-38	3/8	0.67	0.38	0.07
L-44	7/16	0.78	0.45	0.08
L-50	1/2	0.87	0.51	0.10
L-63	5/8	1.08	0.62	0.13
L-75	3/4	1.27	0.76	0.15

**GRADE 8 HEX HEAD CAP SCREWS FIG. 2**

Part No.	Size	A	B	C	D	E	MAX REC. PSI	REC. BOLT TORQUE RANGE LB-IN	
31125	KSF-08	0.50	5/16-18	0.50	1.25	1.45	0.88	5000	175-225
38125	KSF-12	0.75	3/8-16	0.56	1.25	1.48	1.00	5000	250-350
38125	KSF-16	1.00	3/8-16	0.56	1.25	1.48	1.00	5000	325-425
44150	KSF-20	1.25	7/16-14	0.62	1.50	1.78	1.12	4000	425-550
50150	KSF-24	1.50	1/2-13	0.75	1.50	1.81	1.25	3000	550-700
50175	KSF-32	2.00	1/2-13	0.75	1.50	1.81	1.25	3000	650-800
63175	KSF-40	2.50	1/2-13	0.75	1.75	2.06	1.25	2500	950-1100
63200	KSF-48	3.00	5/8-11	0.94	1.75	2.14	1.50	2000	1650-1800
63200	KSF-56	3.50	5/8-11	0.94	2.00	2.39	1.50	500	1400-1600
38150	KSFX-12	0.75	3/8-16	0.56	1.50	1.73	1.00	6000	300-400
44175	KSFX-16	1.00	7/16-14	0.62	1.75	2.03	1.12	6000	500-600
50175	KSFX-20	1.25	1/2-13	0.75	1.75	2.06	1.25	6000	750-900
63225	KSFX-24	1.50	5/8-11	0.94	2.25	2.64	1.50	6000	1400-1600
75275	KSFX-32	2.00	3/4-10	1.12	2.75	3.22	1.75	6000	2400-2600



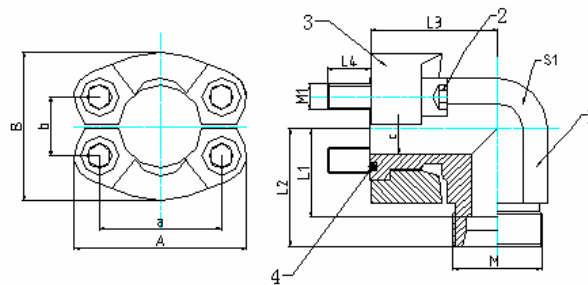


**KFN0802**

**Bulkhead Union Connection Code 61/3000Psi -Standard Pressure**

Part. No.	Flange Size Code 61	Flange Set P/N	ØOD D1	Max Working Pressure Bar	A	a	B	b	Metric Thread M	L1	L2	L3	L4	C	S1	S2	S6	M1	WT (g)
610M-L15-08	1/2	KSFM-08	L15	315	54	38.1	46	17.5	M22*15	29.0	44	36	11.5	12	24	27	5	M8	394
610M-L16-08	1/2	KSFM-08	S16	350	54	38.1	46	17.5	M24*1.5	29.5	48	36	11.5	12	24	30	6	M8	425
610M-L18-12	3/4	KSFM-12	L18	315	65	47.6	52	22.2	M26*1.5	31.5	48	42	15.5	15	30	32	8	M10	657
610M-L22-12	3/4	KSFM-12	L22	160	65	47.6	52	22.2	M30*2	33.5	50	42	15.5	19	30	36	8	M10	663
610M-S20-12	3/4	KSFM-12	S20	350	65	47.6	52	22.2	M30*2	32.5	54	42	15.5	16	30	36	8	M10	756
610M-S25-12	3/4	KSFM-12	S25	350	65	47.6	52	22.2	M36*2	33.0	57	42	15.5	17	30	46	8	M10	886
610M-L28-16	1	KSFM-16	L28	160	70	52.4	59	26.5	M36*2	36.5	53	45	13.5	24	36	41	8	M10	850
610M-S30-16	1	KSFM-16	S30	350	70	52.4	59	26.5	M42*2	36.5	63	45	13.5	24	36	50	8	M10	1064
610M-L35-20	1-1/4	KSFM-20	L35	160	79	58.7	73	30.2	M45*2	46.5	68	50	18.5	30	41	50	8	M10	1152
610M-S25-20	1-1/4	KSFM-20	S25	280	79	58.7	73	30.2	M36*2	43.0	67	50	18.5	20	41	46	8	M10	1348
610M-S30-20	1-1/4	KSFM-20	S30	280	79	58.7	73	30.2	M42*2	43.5	70	50	18.5	25	41	50	8	M10	1398
610M-S38-20	1-1/4	KSFM-20	S38	280	79	58.7	73	30.2	M52*2	43.0	74	50	18.5	28	46	60	8	M12	1527
610M-L35-20M12	1-1/4	KSFM-20M12	L35	160	79	58.7	73	30.2	M45*2	46.5	68	50	23.5	30	41	50	10	M12	1208
610M-S25-20M12	1-1/4	KSFM-20M12	S25	280	79	58.7	73	30.2	M36*2	43.0	67	50	23.5	20	41	46	10	M12	1406
610M-S30-20M12	1-1/4	KSFM-20M12	S30	280	79	58.7	73	30.2	M42*2	43.5	70	50	23.5	25	41	50	10	M12	1460
610M-S38-20M12	1-1/4	KSFM-20M12	S38	280	79	58.7	73	30.2	M52*2	43.0	74	50	23.5	28	46	60	10	M12	1585
610M-L42-24	1-1/2	KSFM-24	L42	160	94	69.9	83	35.7	M52*2	47.0	70	55	18.5	36	46	60	10	M12	1602
610M-S38-24	1-1/2	KSFM-24	S38	210	94	69.9	83	35.7	M52*2	48.0	79	55	18.5	32	46	60	10	M12	1951

K-with mounting kits; F-with split flanges, N-without nut and cutting ring. If nut and cutting ring request "N" should omitted.

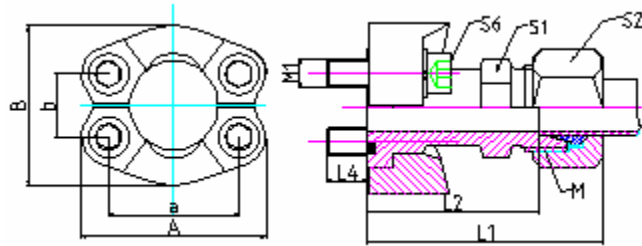


**KFN0802**

**Bulkhead Union Connection Code 62/6000Psi -High Pressure**

Part. No.	Flange Size Code 62	Flange Set P/N	ØOD D1	Max Working Pressure Bar	A	A	B	b	Metric Thread M	L1	L2	L3	L4	C	S1	S2	S6	M1	WT (g)
620M-S16-08	1/2	KSFXM-08	S16	315	54	38.1	46	17.5	M22*15	29.0	44	36	11.5	12	24	27	5	M8	394
620M-S16-12	3/4	KSFXM-12	S16	160	65	47.6	52	22.2	M30*2	33.5	50	42	15.5	19	30	36	8	M10	663
620M-S20-12	3/4	KSFXM-12	S20	350	65	47.6	52	22.2	M30*2	32.5	54	42	15.5	16	30	36	8	M10	756
620M-S25-12	3/4	KSFXM-12	S25	350	65	47.6	52	22.2	M36*2	33.0	57	42	15.5	17	30	46	8	M10	886
620M-S25-16	1	KSFXM-16	S25	160	70	52.4	59	26.5	M36*2	36.5	53	45	13.5	24	36	41	8	M10	850
620M-S30-16	1	KSFXM-16	S30	350	70	52.4	59	26.5	M42*2	36.5	63	45	13.5	24	36	50	8	M10	1064
620M-S30-20	1-1/4	KSFXM-20	S30	280	79	58.7	73	30.2	M42*2	43.5	70	50	18.5	25	41	50	8	M10	1398
620M-S38-20	1-1/4	KSFXM-20	S38	280	79	58.7	73	30.2	M52*2	43.0	74	50	18.5	28	46	60	8	M12	1527
620M-S30-20M12	1-1/4	KSFXM-20	S30	280	79	58.7	73	30.2	M42*2	43.5	70	50	23.5	25	41	50	10	M12	1460
620M-S38-20M12	1-1/4	KSFXM-20	S38	280	79	58.7	73	30.2	M52*2	43.0	74	50	23.5	28	46	60	10	M12	1585
620M-S38-24	1-1/2	KSFXM-24	S38	210	94	69.9	83	35.7	M52*2	48.0	79	55	18.5	32	46	60	10	M12	1951

K-with mounting kits; F-with split flanges, N-without nut and cutting ring. If nut and cutting ring request "N" should omitted.

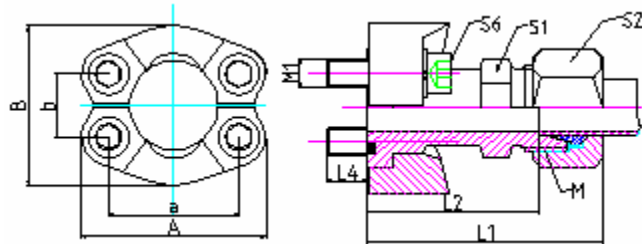
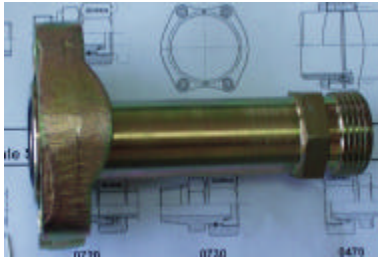


## KF0801

### SAE Flanged Connection Code 61/3000Psi –Standard Pressure

Part No.	Flange Size	Flange Set P/N	Pipe ØOD	Max Working Pressure Bar	A	a	B	b	Metric Thread G1/G2	L1	L2	L4	S1	S2	S6	d1	M1	WT (g)
610M-L15-08	1/2	KSFM-08	L15	315	54	38.1	46	17.5	M22*1.5	56	41.0	11.5	24	27	6	12	M8	359
610M-S16-08	1/2	KSFM-08	S16	350	54	38.1	46	17.5	M24*1.5	60	41.5	11.5	24	30	6	12	M8	396
610M-L18-12	3/4	KSFM-12	L18	315	65	47.6	52	22.2	M26*1.5	62	45.5	15.5	30	32	8	15	M10	585
610M-L22-12	3/4	KSFM-12	L22	160	65	47.6	52	22.2	M30*2	62	45.5	15.5	30	36	8	19	M10	585
610M-S20-12	3/4	KSFM-12	S20	350	65	47.6	52	22.2	M30*2	68	46.5	15.5	30	36	8	16	M10	658
610M-S25-12	3/4	KSFM-12	S25	350	65	47.6	52	22.2	M36*2	69	45.0	15.5	30	46	8	17	M10	778
610M-L28-16	1	KSFM-16	L28	160	70	52.4	59	26.2	M36*2	63	46.5	13.5	36	41	8	24	M10	726
610M-S30-16	1	KSFM-16	S30	350	70	52.4	59	26.2	M42*2	76	49.5	13.5	36	50	8	24	M10	940
610M-L35-20	1-1/4	KSFM-20	L35	160	79	58.7	73	30.2	M45*2	69	47.5	18.5	41	50	8	30	M10	958
610M-S25-20	1-1/4	KSFM-20	S25	280	79	58.7	73	30.2	M36*2	72	48.0	18.5	41	46	8	20	M10	1114
610M-S30-20	1-1/4	KSFM-20	S30	280	79	58.7	73	30.2	M42*2	75	48.5	18.5	41	50	8	25	M10	1134
610M-S38-20	1-1/4	KSFM-20	S38	280	79	58.7	73	30.2	M52*2	81	50.0	18.5	46	60	8	28	M10	1356
610M-L35-20M12	1-1/4	KSFM-20	L35	160	79	58.7	73	30.2	M45*2	69	47.5	23.5	41	50	10	30	M12	1015
610M-S25-20M12	1-1/4	KSFM-20	S25	280	79	58.7	73	30.2	M36*2	72	48.0	23.5	41	46	10	20	M12	1172
610M-S30-20M12	1-1/4	KSFM-20	S30	280	79	58.7	73	30.2	M42*2	75	48.5	23.5	41	50	10	25	M12	1197
610M-S38-20M12	1-1/4	KSFM-20	S38	280	79	58.7	73	30.2	M52*2	81	50.0	23.5	46	60	10	28	M12	1414
610M-L42-24	1-1/2	KSFM-24	L42	160	94	69.9	83	35.7	M52*2	76	53.0	18.5	46	60	10	36	M12	1360
610M-S38-24	1-1/2	KSFM-24	S38	210	94	69.9	83	35.7	M52*2	85	54.0	18.5	46	60	10	32	M12	1632

K-with mounting kits; F-with split flanges, N-without nut and cutting ring. If nut and cutting ring request "N" should omitted.

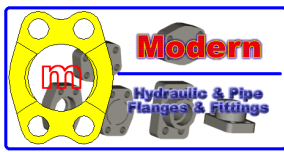


## KF0801

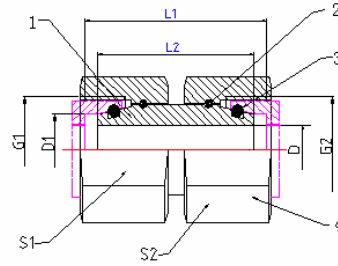
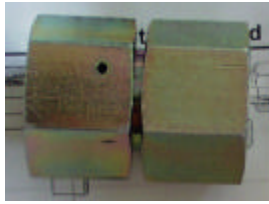
### SAE Flanged Connection Code 62/6000Psi –Standard Pressure

Part No.	Flange Size	Flange Set P/N	Pipe ØOD	Max Working Pressure Bar	A	a	B	b	Metric Thread G1/G2	L1	L2	L4	S1	S2	S6	d1	M1	WT (g)
620M-S16-08	1/2	KSFXM-08	S16	350	56	40.5	47	18.2	M24*1.5	63	44.5	13.5	24	30	6	12	M8	466
620M-S16-12	3/4	KSFXM-12	S16	315	71	50.8	60	23.8	M24*1.5	69	50.5	15.5	30	30	8	12	M10	791
620M-S20-12	3/4	KSFXM-12	S20	160	71	50.8	60	23.8	M30*2	72	50.5	15.5	30	36	8	16	M10	856
620M-S25-12	3/4	KSFXM-12	S25	350	71	50.8	60	23.8	M36*2	75	51.0	15.5	30	46	8	17	M10	972
620M-S25-16	1	KSFXM-16	S25	160	81	57.2	70	27.8	M36*2	84	60.0	20.5	36	46	10	20	M12	1418
620M-S30-16	1	KSFXM-16	S30	350	81	57.2	70	27.8	M42*2	87	60.5	20.5	36	50	10	24	M12	1403
620M-L35-20M12	1-1/4	KSFXM-20	L35	160	95	66.7	77	31.8	M42*2	92	65.5	17.5	41	50	10	25	M12	1954
620M-S25-20M12	1-1/4	KSFXM-20	S25	280	95	66.7	77	31.8	M52*2	98	67.0	17.5	46	60	10	30	M12	2159
620M-S30-20	1-1/4	KSFXM-20	S30	280	95	66.7	77	31.8	M42*2	92	65.5	22.5	41	50	12	25	M14	1904
620M-S38-20	1-1/4	KSFXM-20	S38	280	95	66.7	77	31.8	M52*2	98	67.0	22.5	46	60	12	30	M14	2104
620M-S38-20	1-1/2	KSFXM-24	S38	210	113	79.4	95	36.5	M52*2	104	73.0	24.5	46	60	14	30	M16	3057

K-with mounting kits; F-with split flanges, N-without nut and cutting ring. If nut and cutting ring request "N" should omitted.



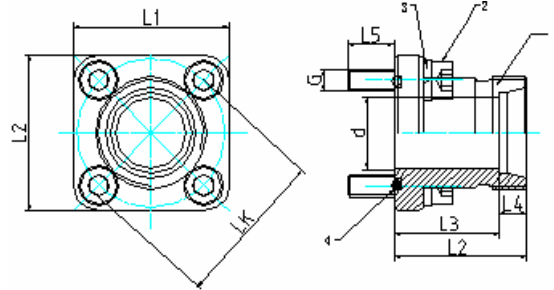
Modern is always touching the Future!



0801

Bulkhead Union Connection													
Part No.	Series	ØOD D1	Max Working Pressure Bar	Normal Pressure Bar	Metric Thread G1/G2	L1	L2	S1	S2	D	O-Ring NBR90	WT (g)	
081M-L06	L	06	315	500	M12*1.5	33	32	14	14	2.5	4.5*1.5	28	
081M-L08		08	315	500	M14*1.5	33	32	17	17	4.0	6.5*1.5	41	
081M-L10		10	315	500	M16*1.5	34	33	19	19	6.0	8*1.5	53	
081M-L12		12	315	400	M18*1.5	34	33	22	22	8.0	10*1.5	71	
081M-L15		15	315	400	M22*1.5	39	38	27	27	10.0	12*2	129	
081M-L18		18	315	400	M26*1.5	38	36	32	32	13.0	15*2	165	
081M-L22		22	160	250	M30*2	44	42	36	36	17.0	20*2	243	
081M-L28		28	160	250	M36*2	48	46	41	41	22.0	26*2	319	
081M-L35		35	160	250	M45*2	52	48	50	50	28.0	32*2.5	449	
081M-L42		42	160	250	M52*2	57	52	60	60	34.0	38*2.5	737	
081M-S06		S	06	630	900	M14*1.5	33	32	17	17	2.5	4.5*1.5	41
081M-S08			08	630	900	M16*1.5	34	33	19	19	4.0	6.5*1.5	54
081M-S10	10		630	900	M18*1.5	35	33	22	22	6.0	8*1.5	74	
081M-S12	12		630	900	M20*1.5	38	36	24	24	8.0	10*1.5	95	
081M-S14	14		630	700	M22*1.5	41	39	27	27	9.0	11*2	131	
081M-S16	16		400	630	M24*1.5	42	39	30	30	11.0	13*2	172	
081M-S20	20		400	630	M30*2	48	44	36	36	14.0	16.3*2.4	261	
081M-S25	25		400	630	M36*2	53	46	46	46	18.0	20.3*2.4	477	
081M-S30	30		400	420	M42*2	62	52	50	50	23.0	25.3*2.4	605	
081M-S38	38		315	420	M52*2	67	52	60	60	30.0	33.3*2.4	826	

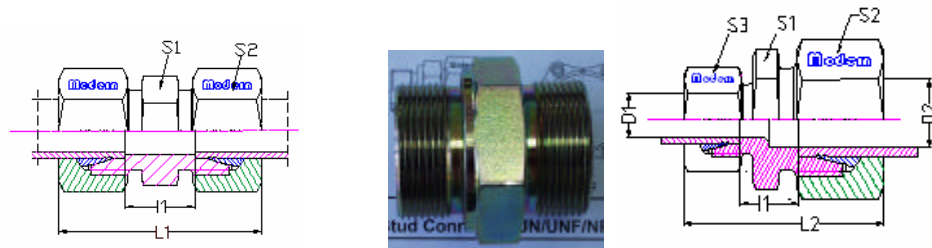
Stainless Steel Part Number: SS-0801081-...



0801

Hydraulic Flange Connection Code 61/3000Psi -Standard Pressure														
Part No.	ØOD D1	PN Bar	Max Working Pressure Bar	L1	LK	L2	L3	L4	L5	G	d	O-Ring	S2 Nut	WT (g)
611M-L10	L10	200	315	39	35	39.0	30	7.0	12.5	M6	8	20*2.5	19	146
611M-L12	L12	200	315	39	35	39.0	30	7.0	12.5	M6	10	20*2.5	22	160
611M-L15	L15	160	250	39	35	38.0	30	7.0	12.5	M6	12	20*2.5	27	192
611M-L15LK40	L15	64	100	42	40	43.0	35	7.0	12.5	M6	12	26*2.5	27	167
611M-L18	L18	64	100	42	40	44.0	35	7.5	12.5	M6	15	26*2.5	32	222
611M-L22	L22	64	100	42	40	44.5	35	7.5	12.5	M6	19	26*2.5	36	240

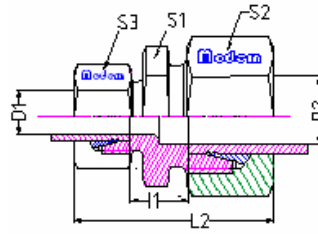
Stainless Steel Part Number: SS-0801611-...



## 0801010

Part. No.	Pipe ØOD	PN (Bar)	Max Working Pressure Bar	L1	I1	S1	S2	WT (g)
010-LL04	04	100	250	31	12	9	10	15
010-LL06	06	100	250	32	9	11	12	20
010-LL08	08	100	250	35	12	12	14	25
010-LL10	10	100	250	35	12	14	17	38
010-LL12	12	100	250	35	11	17	19	45
010-L06	06	315	500	39	10	12	14	35
010-L08	08	315	500	40	11	14	17	51
010-L10	10	315	500	42	13	17	19	65
010-L12	12	315	400	43	14	19	22	86
010-L15	15	315	400	46	16	24	27	142
010-L18	18	315	400	48	16	27	32	202
010-L22	22	160	250	52	20	32	36	269
010-L28	28	160	250	54	21	41	41	333
010-L35	35	160	250	63	20	46	50	523
010-L42	42	160	250	66	21	55	60	775
010-S06	06	630	900	45	16	14	17	64
010-S08	08	630	900	47	18	17	19	81
010-S10	10	630	900	49	17	19	22	111
010-S12	12	630	900	51	19	22	24	135
010-S14	14	630	900	57	22	24	27	190
010-S16	16	400	700	57	21	27	30	231
010-S20	20	400	630	66	23	32	36	371
010-S25	25	400	630	74	26	41	46	681
010-S30	30	400	420	80	27	46	50	805
010-S38	38	315	420	90	29	55	60	1267

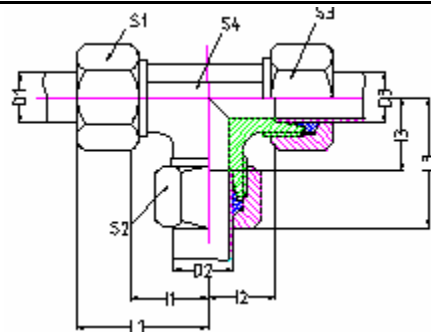




0801

**Straight Reducer Connection**

Part. No.	Pipe ØOD D1	Pipe ØOD D2	PN (Bar)	Max Working Pressure Bar	L2	l1	S1	S2	S3	WT (g)
010-LL06-04	06	04	100	250	32	10.5	11	10	12	18
010-LL08-04	08	04	100	250	34	12.5	12	10	14	22
010-LL08-06	08	06	100	250	34	11.0	12	12	14	23
010-L08-06	08	06	315	500	40	11.0	14	14	17	44
010-L10-06	10	06	315	500	41	12.0	17	14	19	54
010-L10-08	10	08	315	500	41	12.0	17	17	19	59
010-L12-06	12	06	315	400	42	13.0	19	14	22	66
010-L12-08	12	08	315	400	42	13.0	19	17	22	72
010-L12-10	12	10	315	400	43	14.0	19	19	22	77
010-L15-10	15	10	315	400	45	15.0	24	19	27	111
010-L15-12	15	12	315	400	45	15.0	24	22	27	118
010-L18-10	18	10	315	400	46	15.5	27	19	32	154
010-L18-12	18	12	315	400	46	15.5	27	22	32	161
010-L18-15	18	15	315	400	48	16.5	27	27	32	179
010-L22-12	22	12	160	250	48	17.5	32	22	36	198
010-L22-15	22	15	160	250	50	18.5	32	27	36	224
010-L22-18	22	18	160	250	50	18.0	32	32	36	246
010-L28-18	28	18	160	250	52	19.0	41	32	41	308
010-L28-22	28	22	160	250	54	21.0	41	36	41	336
010-L35-22	35	22	160	250	59	21.0	46	36	50	448
010-L35-28	35	28	160	250	59	21.0	46	41	50	461
010-L42-35	42	35	160	250	66	21.5	55	50	60	725
010-S08-06	08	06	630	900	47	18.0	17	17	19	76
010-S10-06	10	06	630	900	48	17.5	19	17	22	94
010-S10-08	10	08	630	900	48	17.5	19	19	22	98
010-S12-06	12	06	630	900	50	19.5	22	17	24	114
010-S12-08	12	08	630	900	50	19.5	22	19	24	117
010-S12-10	12	10	630	900	51	19.0	22	22	24	130
010-S14-10	14	10	630	700	54	20.5	24	22	27	161
010-S14-12	14	12	630	700	54	20.5	24	24	27	166
010-S16-10	16	10	400	630	54	20.0	27	22	30	184
010-S16-12	16	12	400	630	54	20.0	27	24	30	190
010-S16-14	16	14	400	630	57	21.5	27	27	30	207
010-S20-10	20	10	400	630	60	22.0	32	22	36	277
010-S20-12	20	12	400	630	60	22.0	32	24	36	282
010-S20-16	20	16	400	630	63	23.0	32	30	36	318
010-S25-16	25	16	400	630	68	25.5	41	30	46	524
010-S25-20	25	20	400	630	71	25.5	41	36	46	588
010-S30-20	30	20	400	420	74	26.0	46	36	50	650
010-S30-25	30	25	400	420	77	26.5	46	46	50	770
010-S38-30	38	30	315	420	87	29.5	55	50	60	1163



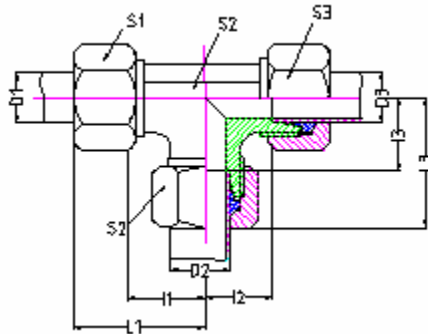
**KN0804010M**



**0804010**

TEE Metric Thread Connection								
Part. No.	Pipe ØOD	PN (Bar)	Max Working Pressure Bar	L3	I3	S1	S4	WT (g)
080401-LL04	04	100	250	21	11.0	9	10	29
080401-LL06	06	100	250	21	9.5	11	12	37
080401-LL08	08	100	250	23	11.5	12	14	50
080401-LL10	10	100	250	24	12.5	14	17	71
080401-LL12	12	100	250	27	15.0	14	19	69
080401-L06	06	315	500	27	12.0	12	14	72
080401-L08	08	315	500	29	14.0	14	17	104
080401-L10	10	315	500	30	15.0	14	19	105
080401-L12	12	315	400	32	17.0	17	22	140
080401-L15	15	315	400	36	21.0	19	27	237
080401-L18	18	315	400	40	23.5	24	32	356
080401-L22	22	160	250	44	27.5	27	36	462
080401-L28	28	160	250	47	30.5	36	41	610
080401-L35	35	160	250	56	34.5	41	50	953
080401-L42	42	160	250	63	40.0	50	60	1410
080401-S06	06	630	900	31	16.0	14	17	124
080401-S08	08	630	900	32	17.0	14	19	131
080401-S10	10	630	900	34	17.5	17	22	185
080401-S12	12	630	900	38	21.5	17	24	223
080401-S14	14	630	900	40	22.0	19	27	296
080401-S16	16	400	700	43	24.5	24	30	404
080401-S20	20	400	630	48	26.5	27	36	600
080401-S25	25	400	630	54	30.0	36	46	1112
080401-S30	30	400	420	62	35.5	41	50	1399
080401-S30	30	400	420	62	35.5	41	50	1399
080401-S38	38	315	420	72	41.0	50	60	2168



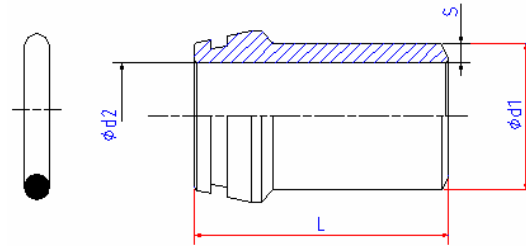


**KN0804010M**

**0804**

**TEE Metric Thread Reducer Connection**

Part. No.	Pipe ØD1	Pipe ØD2	Pipe ØD3	PN (Bar)	Max Working Pressure Bar	L1	L2	L3	I1	I2	I3	S1	S2	S3	S4	WT (g)
010-LL04-08-04	04	08	04	100	250	23	23	23	13.0	13.0	11.5	10	14	10	12	43
010-LL06-04-06	06	04	06	100	250	21	21	21	9.5	9.5	11.0	12	10	12	11	36
010-L06-08-06	06	08	06	100	500	29	29	29	14.0	14.0	14.0	14	17	14	14	93
010-L08-06-08	08	06	08	100	500	29	29	29	14.0	14.0	14.0	17	14	17	14	98
010-L06-10-06	06	10	06	100	500	30	30	30	15.0	15.0	15.0	14	19	14	14	85
010-L08-10-08	08	10	08	315	500	30	30	30	15.0	15.0	15.0	17	19	17	14	97
010-L10-06-10	10	06	10	315	500	30	30	30	15.0	15.0	15.0	19	14	19	14	95
010-L10-08-10	10	08	10	315	500	30	30	30	15.0	15.0	15.0	19	17	19	14	102
010-L10-10-06	10	10	06	315	500	30	30	30	15.0	15.0	15.0	19	19	14	14	95
010-L08-12-08	08	12	08	315	400	32	32	32	17.0	17.0	17.0	17	22	17	17	121
010-L12-06-12	12	06	12	315	400	32	32	32	17.0	17.0	17.0	22	14	22	17	128
010-L12-08-08	12	08	08	315	400	32	32	32	17.0	17.0	17.0	22	17	17	17	120
010-L12-08-12	12	08	12	315	400	32	32	32	17.0	17.0	17.0	22	17	22	17	129
010-L12-10-10	12	10	10	315	400	32	32	32	17.0	17.0	17.0	22	19	19	17	126
010-L12-10-12	12	10	12	315	400	32	32	32	17.0	17.0	17.0	22	19	22	17	133
010-S12-12-10	12	12	10	315	400	32	32	32	17.0	17.0	17.0	22	22	19	17	135
010-S10-15-10	10	15	10	315	400	36	36	36	21.0	21.0	21.0	19	27	19	19	192
010-S12-15-12	12	15	12	315	400	36	36	36	21.0	21.0	21.0	22	27	22	19	198
010-S15-06-15	15	06	15	315	400	36	36	36	21.0	21.0	21.0	27	14	27	19	205
010-S15-10-15	15	10	15	315	400	36	36	36	21.0	21.0	21.0	27	19	27	19	213
010-S15-12-12	15	12	12	315	400	36	36	36	21.0	21.0	21.0	27	22	22	19	201
010-S15-12-15	15	12	15	315	400	36	36	36	21.0	21.0	21.0	27	22	27	19	217
010-S15-15-12	15	15	12	315	400	36	36	36	21.0	21.0	21.0	27	27	22	19	214
010-S12-18-12	12	18	12	315	400	40	39	40	24.0	24.0	23.5	22	32	22	24	287
010-S18-10-10	18	10	10	315	400	40	39	39	23.5	24.0	24.0	32	19	19	24	257
010-S18-10-18	18	10	18	315	400	40	40	39	23.5	23.5	24.0	32	19	32	24	306
010-S18-12-18	18	12	18	315	400	40	40	39	23.5	23.5	24.0	32	22	32	24	317
010-S18-15-18	18	15	18	315	400	40	40	39	23.5	23.5	24.0	32	27	32	24	337
010-S18-18-10	18	18	10	315	400	40	39	40	23.5	24.0	23.5	32	32	19	24	305
010-S22-10-22	22	10	22	160	250	44	44	43	27.5	27.5	28.0	36	19	36	27	398
010-S22-12-22	22	12	22	160	250	44	44	43	27.5	27.5	28.0	36	22	36	27	405
010-S22-15-15	22	15	15	160	250	44	43	43	27.5	28.0	28.0	36	27	27	27	399
010-S22-15-22	22	15	22	160	250	44	44	43	27.5	27.5	28.0	36	27	36	27	433
010-S22-18-18	22	18	18	160	250	44	44	44	27.5	27.5	27.5	36	32	32	27	442
010-S22-18-22	22	18	22	160	250	44	44	44	27.5	27.5	27.5	36	32	36	27	458
010-S22-22-18	22	22	18	160	250	44	44	44	27.5	27.5	27.5	36	36	32	27	440
010-S28-10-28	28	10	28	160	250	47	47	46	30.5	30.5	31.0	41	19	41	36	555
010-S28-12-28	28	12	28	160	250	47	47	46	30.5	30.5	31.0	41	22	41	36	560
010-S28-15-28	28	15	28	160	250	47	47	46	30.5	30.5	31.0	41	27	41	36	595
010-S28-18-28	28	18	28	160	250	47	47	47	30.5	30.5	30.5	41	32	41	36	597
010-S28-22-22	28	22	22	160	250	47	47	47	30.5	30.5	30.5	41	36	36	36	606
010-S28-22-28	28	22	28	160	250	47	47	47	30.5	30.5	30.5	41	36	41	36	602



**K3905/M3905**

Welding Cones						
Part No.	ND	d1*s	D2	L	O-Ring	Weight
K3905-S06*1.5	6	6*1.5	3.00	28.50	4*1.5	0.07
K3905-S08*2.0	8	8*2.0	4.00	29.00	6*1.5	0.09
K3905-S10*1.0	10	10*1.0	8.00	32.00	7.5*1.5	0.01
K3905-S10*1.5		10*1.5	7.00	32.00		0.02
K3905-S10*2.0		10*2.0	6.00	32.00		0.02
K3905-S12*1.5	12	12*1.5	9.00	32.50	9*1.5	0.02
K3905-S12*2.0		12*2.0	8.00	32.50		0.02
K3905-S12*2.5		12*2.5	7.00	32.50		0.02
K3905-S16*1.5	16	16*1.5	13.00	39.00	12*2	0.03
K3905-S16*2.0		16*2.0	12.00	39.00		0.03
K3905-S16*2.5		16*2.5	11.00	39.00		0.04
K3905-S16*3.0		16*3.0	10.00	39.00		0.04
K3905-S20*2.0	20	20*2.0	16.00	43.00	16.3*2.4	0.06
K3905-S20*2.5		20*2.5	15.00	43.00		0.06
K3905-S20*3.0		20*3.0	14.00	43.00		0.06
K3905-S20*4.0		20*4.0	12.00	43.00		0.07
K3905-S25*2.5	25	25*2.5	20.00	50.00	20.3*2.4	0.09
K3905-S25*3.0		25*3.0	19.00	50.00		0.09
K3905-S25*4.0		25*4.0	17.00	50.00		0.11
K3905-S25*5.0		25*5.0	15.00	50.00		0.13
K3905-S30*3.0	30	30*3.0	24.00	52.00	25.3*2.4	0.14
K3905-S30*4.0		30*4.0	22.00	52.00		0.14
K3905-S30*5.0		30*5.0	20.00	52.00		0.17
K3905-S30*6.0		30*6.0	18.00	52.00		0.18
K3905-S38*3.0	38	38*3.0	32.00	56.50	33.3*2.4	0.22
K3905-S38*4.0		38*4.0	30.00	56.50		0.22
K3905-S38*5.0		38*5.0	28.00	56.50		0.25
K3905-S38*6.0		38*6.0	26.00	56.50		0.28
K3905-S38*7.0		38*7.0	24.00	56.50		0.30
K3905-L15*2.0	15	15*2.0	11.00	35.00	12*2	0.03
K3905-L15*2.5		15*2.5	10.00	35.00		0.03
K3905-L18*2.0	18	18*2.0	14.00	35.00	15*2	0.04
K3905-L18*2.5		18*2.5	13.00	35.00		0.04
K3905-L22*2.0	22	22*2.0	18.00	35.00	20*2	0.05
K3905-L22*2.5		22*2.5	17.00	35.00		0.05
K3905-L28*2.5	28	28*2.5	23.00	41.00	26*2	0.08
K3905-L35*3.0	35	35*3.0	29.00	48.00	32*2.5	0.13
K3905-L42*3.0	42	42*3.0	36.00	50.00	38*2.5	0.18

# Modern Flanges

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